ONE HUNDRED AND TWENTY

COPPER-PLATES

OF

ENGLISH MOTHS and BUTTERFLIES,

REPRESENTING

Their Changes into the **CATERPILLAR, CHRYSALIS,** and **FLY** States,

AND

The **PLANTS, FLOWERS,** and **FRUITS,** whereon they feed.

COLOURED with great Exactneſs from the SUBJECTS themſelves.

WITH

A NATURAL HISTORY of the MOTHS and BUTTERFLIES,
Deſcribing the Method of Managing, Preſerving, and Feeding them.

By BENJAMIN WILKES.

To which is added,

An INDEX of the INSECTS and PLANTS, adapted to LINNÆUS's Syſtem.

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A

CATALOGUE

OF THE

MOTHS, BUTTERFLIES, and PLANTS, in WILKES's Natural Hiſtory, with their LINNÆAN Names.

Tab.		
1.	THE great yellow-underwing Moth.	*Phalæna pronuba.*
	The double Stock July-Flower.	*Cheiranthus incanus.*
2.	The wild Arrach Moth.	*Phalæna atriplicis.*
	Wild Arrach.	*Atriplex haſtata.*
3.	The Angle-Shades Moth.	*Phalæna meticuloſa.*
	The great Mogul Plumb.	*Prunus domeſtica.*
4.	The Peaſe-Bloſſom Moth.	*Phalæna delphinii.*
	The Lark-Spur.	*Delphinium conſolida.*
5.	The ſmall green Oak Moth.	*Phalæna viridana.*
	The yellow-ſtriped Tulip.	*Tulipa Geſneriana.*
6.	The ſmall Ermine Moth.	*Phalæna euonymella.*
	The Orange Peach.	*Amygdalus Perſica.*
7.	The Broom Moth.	*Phalæna piſi.*
	The Broom.	*Geniſta ſcoparium.*
8.	The Sallow Moth.	*Phalæna citrago.*
	The Common Sallow.	*Salix caprea.*
9.	The Codling Moth.	*Phalæna pomonella.*
	The Codling-Tree.	*Pyrus malus.*
10.	The Provence Roſe Moth.	*Phalæna ſalicella.*
	The Moſs Provence Roſe.	*Roſa centifolia?*
11.	The ſcollop-winged Oak Moth.	*Phalæna Oo.*
	The yellow Roſe.	*Roſa Gallica?*
12.	The Black-Thorn Moth.	*Phalæna cœruleo-cephala.*
	The common Periwinkle.	*Vinca minor.*
13.	The green Moth, with Silver Lines.	*Phalæna praſinana?*
	The Bruxells Apricot.	*Prunus Armeniaca.*
14.	The Ranunculus Moth.	*Phalæna.*
	The double Orange Ranunculus.	*Ranunculus Aſiaticus.*

Tab.		
15.	The Water-Betony Moth.	*Phalæna verbaſci.*
	The Water-Betony.	*Scrophularia aquatica.*
16.	The ſmall Elephant Moth.	*Sphinx porcellus.*
	The Guelder-Roſe.	*Viburnum opulus.*
17.	The Gold-ſpot Moth.	*Phalæna feſtucæ.*
	Purple flowered Ketmia.	*Hibiſcus Syriacus.*
18.	The Sword-Graſs Moth.	*Phalæna exoleta.*
	The *Perſian* Iris.	*Iris Perſica.*
	The wild Arrach.	*Atriplex haſtata.*
19.	The Jaſmine Hawk-Moth.	*Sphinx Atropos.*
	The Common Jaſmine.	*Jaſminum officinale.*
20.	The Unicorn or Bindweed Hawk-Moth Caterpillar.	
	The ſmall Bindweed.	*Convolvulus arvenſis.*
21.	The Unicorn, or Bindweed Hawk-Moth.	*Sphinx convolvuli.*
	The Guernſey Lily.	*Amaryllis Sarnienſis.*
22.	The Privet Hawk-Moth.	*Sphinx liguſtri.*
	The Privet.	*Liguſtrum vulgare.*
23.	The Olive-Shades, or Lime Hawk-Moth.	*Sphinx tiliæ.*
	The ſmall leaved Lime-Tree.	*Tilia Europæa.*
24.	The eyed Willow Hawk-Moth.	*Sphinx ocellata.*
	The crack Willow.	*Salix fragilis.*
25.	The Poplar Hawk-Moth.	*Sphinx populi.*
	The black Poplar.	*Populus nigra.*
26.	The Ladies Bedſtraw, or Elephant Moth.	*Sphinx Elpenor.*
	White Ladies Bedſtraw.	*Galium paluſtre.*
27.	Ealing's Glory.	*Phalæna oxyacantha.*
	The Black Thorn.	*Prunus ſpinoſa.*
28.	The Ozier, or Pebble-Moth.	*Phalæna ziczac.*
	The Ozier.	*Salix viminalis.*
29.	Fig. 1. The Puſs-Moth.	*Phalæna vinula.*
	2. The Kitten-Moth.	*Phalæna furcula ?*
	The Willow.	*Salix alba.*
	The yellow Ichneumon.	*Ichneumon luteus ?*
30.	The wild Roſe-Moth.	*Phalæna lacertinaria ?*
	Sweet-Briar.	*Roſa eglanteria.*
31.	The Goat-Moth.	*Phalæna Coſſus.*
	The Willow.	*Salix alba.*
32.	The Emperor-Moth Caterpillar.	
	The Black Thorn.	*Prunus ſpinoſa.*
33.	The Emperor-Moth.	*Phalæna pavonia.*
	The white Fruit-Bramble.	*Rubus fruticoſa.*
34.	The Plumb-Tree Moth.	*Phalæna operana.*
	The Roman Nectarine.	*Amygdalus Perſica.*
35.	The Willow Red Underwing Moth.	*Phalæna pacta.*
	The weeping Willow.	*Salix Babylonica.*
36.	The great Tiger-Moth.	*Phalæna Caja.*
	The Hatfield Plumb.	*Prunus domeſtica.*
37.	The Cream-ſpotted Tiger-Moth.	*Phalæna villica.*
	The Common Chickweed.	*Alſine media.*

38. The

Tab.		
38.	The ſcarlet Tyger Moth.	*Phalæna Dominula.*
	The Hound's Tongue.	*Cynogloſſum officinale.*
39.	The black Arches, a Moth.	*Phalæna monacha.*
	The Apple-Tree.	*Pyrus malus.*
40.	The great Ermine Moth.	*Phalæna lubricipeda.*
	The ſmall Garden Sun-Flower.	*Helianthus multiflorus.*
41.	The ſpotted Buff Moth.	*Phalæna lubricipeda.*
	Arſmart.	*Polygonum, Perſicaria.*
42.	The Gipſey Moth.	*Phalæna diſpar.*
	The Crab-Tree.	*Pyrus malus.*
43.	The Buff-tip Moth.	*Phalæna bucephala.*
	The yellow dwarf-Willow.	*Salix vitellina.*
44.	The white Sattin Moth.	*Phalæna ſalicis.*
	The white Poplar.	*Populus alba.*
45.	The Lacquey Moth.	*Phalæna Neuſtria.*
	Fig. 1. Tway Blade.	*Ophrys ovata.*
	2. Shining Dovesfoot Cranesbill.	*Geranium lucidum.*
	3. Climbing Fumitory, or yellow Vetchling.	*Fumaria claviculata.*
46.	The great Egger Moth.	*Phalæna quercus.*
	The white Thorn.	*Cratægus Oxyacantha.*
47.	The Graſs Egger Moth.	*Phalæna quercus.*
	The double-flowering Cherry.	*Prunus ceraſus.*
	Turfy Hair Graſs.	*Aira cæſpitoſa.*
48.	The December Moth.	*Phalæna populi.*
	The Nut-Tree.	*Corylus avellana.*
49.	The ſpotted red and white underwing Moth.	*Phalæna fuliginoſa.*
	Fig 1. The black Thorn.	*Prunus ſpinoſa.*
	2. The Columbine.	*Aquilegia vulgaris.*
	3. The Ranunculus.	*Ranunculus Aſiaticus.*
	4. The white Bells.	*Hyacinthus non ſcriptus.*
50.	The Wood Tyger Moth.	*Phalæna plantaginis.*
	The Vredenriek Hyacinth.	*Hyacinthus orientalis.*
	The leſſer Plantain.	*Plantago lanceolata.*
51.	The Mother of Pearl Moth.	*Phalæna verticalis.*
	The Cherry Plumb.	*Prunus domeſtica.*
52.	The yellow July Oak Moth.	*Phalæna quadra.*
	The May Cherry.	*Prunus ceraſus.*
53.	The ſmall Egger Moth.	*Phalæna lanceſtris.*
	The Almond-Tree.	*Amygdalus communis.*
54.	The Fox-coloured Moth.	*Phalæna rubi.*
	The Bramble or Black-berry Fruit.	*Rubus fruticoſus.*
55.	The Cinnabar Moth.	*Phalæna Jacobæa.*
	Ragwort.	*Senecio Jacobæa.*
56.	The Bramble Moth.	*Phalæna rumicis.*
	The Orange Apricot.	*Prunus Armeniaca.*
57.	The Lappit Moth.	*Phalæna quercifolia.*
	The Privet-leaved Philyrea.	*Philyrea anguſtifolia.*

Tab.		
58.	The Drinker Moth.	*Phalæna potatoria.*
	Fig. 1. The yellow Vetchling.	*Lathyrus pratenſis.*
	2. Biſtort.	*Polygonum biſtorta.*
	3. The white Darnel-Graſs.	*Lolium temulentum.*
	4. The Wood-Peaſe.	*Orobus tuberoſus.*
59.	The yellow-tailed Moth.	*Phalæna chryſorrhœa.*
	The Alder-Tree.	*Betula alnus.*
60.	The Dagger-Moth.	*Phalæna pſi.*
	The moſt double Sweet-briar.	*Roſa eglanteria.*
61.	The wild Pine-Tree Lappit-Moth.	*Phalæna pini.*
	The wild Pine-Tree.	*Pinus ſylveſtris.*
62.	The black Tuſſock-Moth.	*Phalæna faſcellina.*
	The white double Roſe.	*Roſa alba.*
63.	The yellow Tuſſock-Moth.	*Phalæna pudibunda.*
	Red Archangel.	*Lamium rubrum.*
64.	The red-ſpot Tuſſock-Moth.	*Phalæna antiqua.*
	The ſmooth-leav'd Elm.	*Ulmus campeſtris.*
65.	The Orange Tuſſock-Moth.	*Phalæna gonoſtigma.*
	The elegant upright St. John's Wort.	*Hypericum pulchrum.*
66.	The Nut-Tree Tuſſock-Moth.	*Phalæna coryli.*
	The Maſculine Apricot.	*Prunus Armeniaca.*
67.	The Sycamore Tuſſock-Moth.	*Phalæna aceris.*
	The Sycamore-Tree.	*Acer pſeudo-platanus.*
68.	The crimſon under-wing Moth.	*Phalæna nupta.*
	The common Oak.	*Quercus robur.*
69.	The Silver Y Moth.	*Phalæna gamma.*
	Common Sage.	*Salvia officinalis.*
70.	The Brindled Beauty Moth.	
	The Honey Cherry.	*Prunus cera∫us.*
71.	The July Arrach Moth.	*Phalæna chenopodiata.*
	The black Currants.	*Ribes nigrum.*
72.	The mottled Umber-Moth.	*Phalæna defoliata.*
	The Apricot Plumb.	*Prunus domeſtica.*
73.	The July Sallow-Moth.	*Phalæna fluctuata?*
	The wild black Cherry.	*Prunus avium.*
74.	The buff Argus-Moth.	*Phalæna amataria.*
	The double-flowered Sweet-briar.	*Roſa eglanteria.*
75.	The green Broom-Moth.	*Phalæna papilionaria?*
	The Needle-Furze.	*Geniſta Anglica.*
76.	The Lime Moſs-Moth.	*Phalæna.*
	The yellow-flowered Sage.	*Phlomis fruticoſa.*
77.	The ſpotted Elm-Moth.	*Phalæna betularia.*
	The Wych-Elm.	*Ulmus campeſtris.*
78.	The Swallow-Tail Moth.	*Phalæna ſambucaria.*
	The Bramble.	*Rubus fruticoſus.*
79.	The October Moth.	*Phalæna pennaria?*
	The ſmooth-leaved Elm.	*Ulmus campeſtris.*
80.	The Brimſtone Moth.	*Phalæna cratægata.*
	Fig. 1. The white Thorn.	*Cratægus oxyacantha.*
	2. The blue Bells.	*Hyacinthus non ſcriptus.*
	3. The red Ranunculus.	*Ranunculus Aſiaticus.*

Tab.		
81.	The ſcollop-winged Moth.	*Phalæna.*
	The white Thorn.	*Cratægus oxyacantha.*
82.	The Richmond-Beauty Moth.	*Phalæna ſyringaria.*
	The Spaniſh or Catalonian Jaſmine.	*Jaſminum grandiflorum.*
83.	The Hawthorn-Moth.	*Phalæna.*
	The Carolina Hawthorn.	*Cratægus tomentoſa.*
84.	The Orange-Moth.	*Phalæna prunaria.*
	The dwarf or creeping Willow.	*Salix repens.*
85.	The large Magpie-Moth.	*Phalæna groſſulariata.*
	The Currant-Tree.	*Ribes rubrum.*
86.	The Gooſeberry-Moth.	*Phalæna Wauaria.*
	The Gooſeberry-Tree.	*Ribes uva criſpa.*
87.	The Brindle-Moth.	*Phalæna.*
	Bladder Sena.	*Colutea arboreſcens.*
88.	The ſmall Oak-Egger Moth.	*Phalæna.*
	The double Velvet Roſe.	*Roſa Gallica.*
89.	The Glory of Kent, a Moth.	*Phalæna verſicolor.*
	The double-flowering Peach.	*Amygdalus nana.*
90.	The Cliefden Nonpareil, a Moth.	*Phalæna fraxini.*
	The Ciphian Roſe.	*Roſa ſpinoſiſſima.*
91.	The Burnet-Moth.	*Sphinx filipendulæ.*
	The Burnet Roſe.	*Roſa ſpinoſiſſima.*
92.	The Meadow Saxafrage.	*Peucedanum ſilaus.*
93.	The Swallow-tail Butterfly.	*Papilio Machaon.*
	Common Fennel.	*Anethum fœniculum.*
94.	The Brimſtone Butterfly.	*Papilio rhamni.*
	The Buck-Thorn Tree.	*Rhamnus catharticus.*
95.	The white Butterfly with black Veins.	*Papilio cratægi.*
	The Mountain-Elder.	*Sambucus racemoſa.*
	The White-Thorn.	*Cratægus oxyacantha.*
96.	The large white Garden Butterfly.	*Papilio braſſicæ.*
	The Naſturtium Flower.	*Tropæolum majus.*
97.	The ſmall white Garden Butterfly.	*Papilio rapæ.*
	The double-flowering Almond.	*Amygdalus communis.*
98.	The white Butterfly with green Veins.	*Papilio napi.*
	The purple Auricula.	*Primula auricula.*
	The Cabbage in flower.	*Braſſica oleracea.*
99.	The Orange-tip Butterfly.	*Papilio cardamines.*
	The Mountain Currant.	*Ribes alpinum.*
	The wild Cole.	*Braſſica napus.*
100.	The Marble Butterfly.	*Papilio galathæa.*
	Fig. 1. The Bent-Graſs.	*Aira cæſpitoſa.*
	2. Brown Millet-Graſs.	*Agroſtis alba.*
	3. Yellow Ladies-Bedſtraw.	*Galium verum.*
	4. Meadow Fox-tail Graſs.	*Alopecurus pratenſis.*
101.	The Meadow brown Butterfly.	*Papilio jurtina.*
	The Water Elder.	*Viburnum opulus.*
102.	The great Argus Butterfly.	*Papilio mæra.*
	The Paſſion-Flower.	*Paſſiflora cærulea.*
	Annual Poa or Meadow-Graſs.	*Poa annua.*

Tab.		
103.	The Wood Argus Butterfly.	*Papilio ægeria.*
	Spaniſh Broom.	*Spartium junceum.*
104.	The grizzled Butterfly.	*Papilio malvæ.*
	The Common Mallow.	*Malva ſylveſtris.*
105.	The Admirable Butterfly.	*Papilio atalanta.*
	The great Stinging-Nettle.	*Urtica urens.*
106.	The Peacock Butterfly.	*Papilio Io.*
	Newington Peach.	*Amygdalus Perſica.*
107.	Fig. 1. The painted-Lady Butterfly.	*Papilio cardui.*
	2. The ſmall Tortoiſe-ſhell Butterfly.	*Papilio urticæ.*
	The great Stinging-Nettle.	*Urtica urens.*
108.	The great Tortoiſe-ſhell Butterfly.	*Papilio polychloros.*
	The common Elm.	*Ulmus campeſtris.*
109.	The Comma Butterfly.	*Papilio c album.*
	The double wild Poppy.	*Papaver orientale.*
110.	The great Fritilary Butterfly.	*Papilio Paphia.*
	The Bramble.	*Rubus fruticoſus.*
111.	The Plantain Fritilary Butterfly.	*Papilio cinxia.*
	Fig. 1. The Rough Graſs.	*Dactylis glomerata.*
	2. Narrow-leaved Plantain.	*Plantago lanceolata.*
	3. Clover.	*Trifolium pratenſe.*
112.	The Heath Fritilary Butterfly.	*Papilio maturna.*
	Common Heath.	*Erica vulgaris.*
113.	The Willow-Butterfly.	*Papilio antiopa.*
	The white Dog Roſe,	*Roſa arvenſis.*
114.	The ſmall Fritilary Butterfly.	*Papilio lucina.*
	Variegated Ketmia.	*Hibiſcus Syriacus.*
115.	The great Fritilary Butterfly.	*Papilio aglaja.*
	Scorpion Sena.	*Coronilla emerus.*
116.	The purple Hairſtreak Butterfly.	*Papilio quercus.*
	The Oak-Tree.	*Quercus robur.*
117.	The brown Hair-ſtreak Butterfly.	*Papilio betulæ.*
	The Black Thorn.	*Prunus ſpinoſa.*
118.	The green Butterfly.	*Papilio rubi.*
	The Bramble or Blackberry.	*Rubus fruticoſus*
119.	The blue Argus Butterfly.	*Papilio Argus.*
	The green Gage Plumb.	*Prunus domeſtica.*
120.	The purple High-flyer, or Emperor-Butterfly.	*Papilio Iris.*
	The Oak.	*Quercus robur.*

T O

MARTIN FOLKES, Eſq; PRESIDENT,

And to the

COUNCIL and FELLOWS of the

ROYAL SOCIETY

O F

LONDON.

GENTLEMEN,

I Humbly take the Liberty to addreſs this Work to You, and preſume to hope, from Your exact Knowledge of the Subjects it contains, and Your having been pleaſed to countenance the ſeveral Parts of it, as they were publiſhed, with Your Acceptance and Approbation, that You will not, now they are put together, deny them the Honour of Your Patronage.

The Inſtitution of Your Society for the Improvement of Natural Knowledge, muſt render it not improper to lay before You every Attempt towards ſuch Improvement. On the contrary, You have a ſort of Right to expect, that every Author in Natural Hiſtory, ſhould ſubmit his Labours to Your Examination, and think himſelf happy if they will ſtand the Teſt of Your Judgment.

The Animal and Vegetable Parts of the Creation afford endleſs Stores for the Enquiry and Entertainment of the curious Naturaliſt: and ſome of the moſt beautiful of each Sort, are here preſented to the Eye,

Eye, in their true Size, Form, and Colour. Nor will it be objected by You, that too much Time and Pains has been beſtowed on a Company of Inſects, which few People trouble themſelves about; for true Philoſophy teaches, that the meaneſt thing God has made, is not below the Dignity of the moſt exalted of mortal Men to conſider. But the Creatures here exhibited, are adorned with ſuch a Variety of Beauty to engage our Notice, and undergo ſuch amazing Changes in their Form and Appearance, that a thinking Mind can hardly avoid regarding them with uncommon Pleaſure and a more than ordinary Attention.

Little, perhaps, is wanting to make the Study of Nature univerſally purſued, than to render it eaſy and intelligible; for, ſurely, the Underſtanding God has given us, can never be more properly employed, than in examining and conſidering thoſe Proofs of his Divine Goodneſs and Power, which are placed every where around us. This is a moſt reaſonable and ſatisfactory Entertainment; and I am fully perſuaded, many of You, Gentlemen, have often experienced more real Pleaſure from ſuch Examinations, than thoſe who know nothing of them can poſſibly conceive.

My Attempt towards a Natural Hiſtory of the *Engliſh Moths* and *Butterflies*, (which is here added to the Paintings of them) wherein they are divided into Claſſes, and their ſeveral Progreſſions and Changes from the Egg to the Fly State are deſcribed, (and that not from Books or Conjectures, but from actual Experiments and cloſe Obſervation) will, I hope, meet with Your Approbation.

But not to be longer troubleſome than to beg Pardon for this Preſumption, and wiſh a continual Increaſe of Proſperity and Honour to the ROYAL SOCIETY of *London,* permit me to ſubſcribe myſelf,

GENTLEMEN,

Your moſt obedient,

Humble Servant,

BENJAMIN WILKES.

THE

PREFACE.

THE *Painting of HISTORY PIECES and PORTRAITS in Oyl being the Profeſſion of the Author of this Work, he frequently found himſelf at a Loſs, in the Courſe of his Employment, to underſtand with Certainty what Colours would contraſt* with *and ſet off each other to the beſt Advantage; and perhaps had ſtill remained under the ſame Difficulties, had he not been led by Accident into the Means of learning all this from Nature, which undoubtedly is the beſt Inſtructor.*

IT happened that a Friend invited him one Evening, to bear him Company to a Society named the AURELIAN: *the agreeable Purpoſe of which is, to become acquainted with that Part of Natural Philoſophy which relates to the Generation and Properties of Inſects, of which they have a fine Collection. And here he firſt ſaw ſuch Specimens of Nature's admirable Skill in the Diſpoſition, Arrangement, and contraſting of Colours (particularly amongſt* the Moths *and* Butterflies*) as ſtruck him with Amazement, and convinced him, at the ſame Time, that ſtudying them would turn greatly to his Advantage.*

WITH this View he deſired to become a Member of the AURELIAN SOCIETY, *and ſoon after had the Honour to be admitted; when, by his own Diligence, together with the gene-*

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nerous and kind Aſſiſtance of ſome Gentlemen of the Society, it was not long before he had acquired a tolerable Collection of Engliſh MOTHS *and* BUTTERFLIES; *and for ten Years paſt his leiſure Hours have chiefly been employed in the collecting and making Drawings of the different* Engliſh Caterpillars, Aureliæ *or* Chryſalides, Flies, *&c. that he could any Ways obtain; and in making ſuch Obſervations and Remarks thereon as ſhall now, with all Submiſſion, be laid before the Publick.*

HE has been greatly aſſiſted in this Work by that well-known and ingenious Naturaliſt, Mr. Joſeph Dandridge; *to whoſe noble Collection he had free Acceſs during his Life-time, and alſo the Liberty of making what Uſe he thought fit of his curious Remarks on theſe Subjects, which were the Fruits of no leſs than forty Years Experience. And he is ſtill favoured in the like Manner by his Succeſſors, as often as he finds Occaſion.*

RESPECT to the Memory of this valuable and worthy Man, will not ſuffer him to omit this Opportunity of giving him the Character that is moſt juſtly his due, viz. *That he was a Perſon of unbounded Curioſity, and unwearied Application in his Reſearches into the Works of Nature; in the Study of which all thoſe Hours were employed that could be ſpared from his immediate Buſineſs; by which Means, during a long Life, he had not only got together a great Variety of the moſt rare natural Productions, but alſo from Time to Time had written down his Obſervations thereon, which deſerve the higheſt Regard, as his Judgment and Veracity were both without Exception. And, as he loved theſe Studies himſelf, he was a zealous Encourager of all that had the ſame Inclination, whom he was always ready to aſſiſt with his laboriouſly acquired Knowledge.*

BUT to proceed——He muſt alſo acknowledge, that in the Courſe of this Undertaking he has made uſe of the Drawings of ſome Caterpillars *and* Flies *which were publiſhed not long ago in a curious Work of this Sort, by* J. A. Roſel, *at* Norimburgh, *in* Germany: *But he has taken from him ſuch only as are exactly of the ſame Species with what we have in* England, *though we have not yet been ſo fortunate to meet with them under all their ſeveral Changes: what Information that Gentleman has given, as to thoſe Particularities concerning them which we are yet unacquainted with, he therefore judged proper to inſert.*

AS to the Plants, Flowers, *and* Fruits, *he declares himſelf under the higheſt Obligation to a moſt curious Naturaliſt, and worthy Member of the Royal Society of* London, *whoſe coſtly and valuable Collection is known to the learned World, and eſteemed as it deſerves. This Gentleman has generouſly permitted him to make uſe of many excellent Paintings of theſe Subjects, which were taken from Nature by thoſe two celebrated Artiſts Mr.* George Dennis

Ehret,

Ehret, *and* Mr. Jacobus Van Heyſum, *and executed with the utmoſt Judgment and Command of Pencil, ſo that he could hardly doubt but that true Copies of them would give great Pleaſure to the Lovers of Botany, whom he has endeavoured to entertain with all the Variety he could introduce.*

SOME Ill-natured People, that love to find Fault with every Thing, have, he hears, objected againſt the Liberty he has taken, in giving in ſeveral of his Plates, Plants, Flowers, *and* Fruits, *that are not in Reality the Food of the* Caterpillars *therein exhibited; but as the greateſt Part of the* Caterpillars *deſcribed in this Work feed chiefly on the* Oak, Elm, Black-Thorn, White-Thorn, Willow, *and* Nettle, *all which are ſeparately repreſented in different Plates, it was judged unneceſſary (and would certainly have been tireſom) to repeat thoſe Subjects, as often as different* Caterpillars *are preſented to which they ſerve for Food: and therefore, inſtead of ſo doing, the Author has enriched his Undertaking with ſome of the moſt beautiful Productions of Nature in the Vegetable Kingdom: But, however, has not forgot to place the* Caterpillars, *in moſt of the Plates, on a ſmall Specimen of the real Plant on which it feeds, as will be properly explained in the Account of each Particular* Fly :——*and this Care, it is hoped will be an Anſwer to all unreaſonable Cavils.*

THE Plates *are all drawn and etched with his own Hand, in a quite new Manner; whereby every Deſign, when coloured, appears like a regular Piece of Painting; and the* Flies *are drawn and painted with the utmoſt Exactneſs, from as fine and perfect Specimens as can be bred. The common Method of amuſing the Reader with long Accounts of the Colours and Markings of each* Fly *is avoided in this Work, as entirely needleſs, when the Objects are truly repreſented before his Eyes.*

HIS Claſſing of the Caterpillars *will be found of great Uſe; for if it be enquired what* Fly *any* Caterpillar *that may happen to preſent itſelf will produce, by obſerving its Character you will eaſily be ſatisfied (if it is in this Collection) and be likewiſe taught what its proper Food is,* &c. Names *are abſolutely neceſſary to diſtinguiſh one* Fly *from another, and enable the Curious in this Study to communicate any Obſervations they may make; which, without giving Names to the* Flies, *would be very difficult, if even poſſible to be done; as they muſt be greatly at a Loſs to make others perfectly underſtand what* Flies *they are treating of. The worthy Members of the* AURELIAN SOCIETY, *and ſeveral other ingenious Gentlemen, have been ſo ſenſible of this, that they, from Time to Time, have thought proper to beſtow ſome Name on every Species that has come within their Knowledge.*

The PREFACE.

INDEED Names are arbitrary, and if remembered, and the Intent of them well underſtood, may, whatever they are, ſerve the Purpoſe of giving them: But here, as in every Thing elſe, a Propriety is to be aimed at, and the Names given ought to denote ſome diſtinguiſhing Particularity, and that the moſt obvious, in the Subject on which they are beſtowed, ſo as to make the Name, if poſſible, deſcriptive of the Thing: Which Rule has been followed as ſtrictly as might be in naming the Moths *and* Butterflies *contained in this Work: that is to ſay, the Shape, the Colour, the Marking, the Food, or the Place where found is what they are named from. But in doing this, where the Author found them named to his Hands in this deſcriptive Manner, he has gladly retained the Name they had already, and only preſumes to beſtow Names himſelf on ſuch as either had none at all, or which he thought not ſufficiently denotative of the particular* Flies *intended to be known by them.*

THE Diviſion of the Work into Books and Chapters may need ſome Explanation, ſince under ſome of the Diviſions very few, or even but one ſingle Fly *is placed; the Reaſon whereof is, that the Plan here laid down is intended for the Arranging of all the* Moths *and* Butterflies, *whoſe Progreſſion is known at preſent, or ſhall hereafter be diſcovered in* England; *of which, as the* Flies *here given are but a ſmall Part, this muſt be conſidered but as an Out-line to be filled up occaſionally.*

IT is hoped the Directions here given how to collect the Caterpillars *or* Chryſalides, *how to feed and take Care of them, how to preſerve the* Flies *when bred, and where and at what Times they may be found moſt eaſily, will prove both acceptable and uſeful to every curious Collector; and as the Author thinks himſelf under great Obligations to the Subſcribers to, and Encouragers of this Undertaking, a Liſt of their Names is added as a Memorial of his Gratitude.*

THESE Things being premiſed, we come now to give a ſhort Sketch of the Natural Hiſtory of the Engliſh Moths *and* Butterflies *in general.*

INTRODUCTION.

Of Moths and Butterflies in general.

THE Opinion of *Equivocal Generation* however formerly received, has by the preſent Age been deſervedly rejected; ſince every Obſervation proves, that all Creatures are produced by Parents of their own Kind, and that in general thoſe Parents are Male and Female; and the Production of every *Moth* and *Butterfly* in this Manner, is I believe at preſent not doubted by any Body.

THE Females, both of the *Moth* and *Butterfly*, lay their Eggs in a ſhort Time after Copulation, *upon* or contiguous *to* what will ſupply proper Food for the young Brood when produced. After a certain Period the Infant *Caterpillars* included in the Eggs burſt their Shells, crawl forth, and feed upon the Proviſion ready prepared for them. And each of theſe *Caterpillars*, having fed its appointed Time, becomes a *Chryſalis* or *Aurelia*; from which State, after a while, it iſſues forth a *Fly* in the Likeneſs of its Parent.

SOME Species of *Butterflies* breed twice a Year. Thoſe that come forth in *May* lay their Eggs ſoon after, which Eggs in about nine Days Time are hatched. The *Caterpillars* feed for about ſix Weeks, then change to *Chryſalis*, lie in that State for about fourteen Days, and then the *Flies* are bred. Theſe lay their Eggs as the firſt Brood did, the *Caterpillars* change to *Chryſalis* in *September*, and the *Flies* come forth in the following *May*.

The Variety of the *Moth* Kinds is ſo great, that perhaps there is ſcarce a Day in the Year when ſome of them are not bred. The Time of their Continuance in the *Chryſalis* State will be beſt known by attending to the Account of each *Moth* deſcribed in the following Plates. Some *Moths* as well as *Butterflies* breed twice a Year.

IT frequently happens, that the *Fly* does not come out at the uſual Time, but continues in the *Chryſalis* State till that Time Twelvemonth; ſo that the Creature remains in that Caſe a Year and nine Months (and ſometimes longer) in a State of Reſt, without Nouriſhment of any kind.

THUS much in general:——We deſcend now to particular Obſervations.

On the different Manner of laying their Eggs.

ALL *Butterflies* and *Moths* lay a great Number of Eggs, ſome even as far as two or three Hundred. The Eggs of ſome Kinds are glutenous, or covered with a glewy Moiſture; but thoſe of others are not ſo: The glutenous are fixt (ſometimes ſingly) on *Graſs, the Leaves of Trees, Shrubs*, &c. and ſometimes in Cluſters after the ſame Manner. Some Sorts of Eggs are laid naked or uncovered, and others are cloath'd with a ſort of Down, &c. Some *Flies* lay them in a Spiral Line, or Screw-like Figure, round a ſmall Twigg, a Stalk of Graſs,

&c. And theſe may be pulled off entire, in Faſhion like a Cylindrical Tube, and as hard as Horn: Others depoſit theirs in the Chinks of the *Barks of Trees*, &c. &c. &c.

IT is obſerveable, that the whole Proceſs from the Egg, to the *Fly*, of many Species, is perperform'd in about ſixty Days. But the *Goat Moth* is an Exception to this Rule, being reported to be three Years proceeding from the Egg to the *Fly* State.

Of the Eggs.

THE Eggs are of various Forms; ſome are round, ſome are oval, and many of the *Moth-Kind* flat, and perforated through the Middle; ſo that the *Embrios* or *Caterpillars* lie curl'd up before they are hatch'd, as they frequently do afterwards when come to Maturity. They are found of all manner of Colours, and many of them are extremely beautiful if view'd with a Microſcope; ſome being curiouſly rib'd and adorn'd with *Protuberances*, &c. like the niceſt carved Work; others marbled and ſpotted with an amazing Variety of delightful colouring.

Of CATERPILLARS.

CATERPILLARS are uſually divided into the Naked and Cloathed Kinds. Among the Cloath'd ſome have only ſmall Tufts of Hair or Down, others are cover'd all over with it.

THE *Caterpillars* of all known *Butterflies* have ſix Hooks or Claws before, eight Feet in the Middle of their Body, and two Holders behind. Thoſe that produce *Moths* have all ſix Hooks or Claws before, and Holders behind. Some have eight Feet in the Middle, ſome four, and ſome only two next their Holders.

SOME Species of *Caterpillars* always feed incloſ'd or ſpun up in the Leaves they feed upon, others take their Food openly and in Sight.

SOME are ſociable and herd together whilſt young, but when they change their third Skin they grow unſociable and feed ſeparately.

OTHERS are born unſociable, and feed ſeparately from their Infancy.

SOME Species ſpin a large Web that will contain an hundred *Caterpillars*, or more, from which they never go far till they have eat up all the Leaves that are near thereto: Then they ſpin a new Web, and ſo (ſhifting their Quarters) in a ſhort Time, inſtead of the green Leaves that they have devoured, leave the Tree, or Buſh, covered only with their white Webs.

SOME Sorts, when diſturbed, let themſelves down by a Thread like a Spider, by which Means they avoid being devoured by other Inſects that have not the Means of following them, *&c.*

Of the Food of CATERPILLARS, and their Manner of Feeding.

THEIR Food is almoſt general, but ſome Kinds will eat nothing except their own particular Trees, or Plants.

Some Species feed upon Herbage, others live and feed upon the ſolid Parts of Trees, and Barks.

Some dwell in the Earth, or other private Receſſes in the Day-time, and at Night come forth, and feed on Graſs, Flowers, *&c.* Others again feed on the different Kinds of Moſſes, Heath, Broom, the Leaves of Trees, Shrubs, *&c.*

Some feed upon the Waters naked and expoſed, and others make themſelves Caſes of Sticks, Ruſhes, *&c.* in the Waters, where they get their Food.

Of the Forms of Caterpillars.

THE Variety and Beauty which preſent themſelves to our Eyes in the Form and Colouring of *Caterpillars*, are no leſs remarkable than the *Flies* themſelves, as the Reader will be ſatisfied by examining the following Plates.

Of the Change of Caterpillars into the *Chryſalis* State.

WHEN a *Caterpillar* has fed its appointed Time, and is come to full Maturity, it undergoes a Change, and becomes a Body of a different Form, incruſted with a Shell, and uſually called a *Chryſalis* or *Aurelia*; the Shell of which is formed underneath the Skin of the *Caterpillar*, which Skin comes off as ſoon as the *Aurelia* becomes perfect.

Of the Chrysalis or Aurelia.

DURING its Continuance in the *Chryſalis* State, it ſeems to have no Senſe but Feeling; and ſome of them have even that in a very low Degree, for they may be touched pretty roughly without moving.

The *Chryſalides* or *Aureliæ* of the *Butterfly-Kind* are all very beautiful; ſome of them look as if they were ſtudded with Gold; ſome are ſtriped, others ſpotted, and others mottled with all the various Colours of the Rainbow. But thoſe of the *Moth* Kind are not ſo; differing very little from one another, either in Shape or Colour, except the Magpye, and ſome few beſides.

How the *Aurelia* or *Chryſalis* is ſecured.

NOTHING in Nature is perhaps more deſerving Notice, than the many different Methods whereby *Caterpillars* conceal and ſecure themſelves whilſt in this helpleſs and unactive Condition.

Some of them ſpin a large Caſe of Silk in Form of an Egg, wherein the *Chryſalis* lies concealed, till the Time comes for the *Fly* to make its Appearance, which it does by piercing through this Caſe.

Of ſuch Caſes there are ſeveral Sorts, different in Form and Colour:

SOME are long, and drawn out to a Point at each End; others are more round.

THE Texture of ſome is very thick and cloſe.

OTHERS are thin, like Gauſe, inſomuch that the *Chryſalis* may be ſeen thorough them.

SOME *Aureliæ* are white, ſome yellow, and others of different Hues; and moſt of the hairy *Caterpillars* intermix their Hair amongſt the Spinning.

SOME *Caterpillars* form a hard-cruſted Caſe, compoſed of ſilk Threads glewed together, in ſuch Manner as to become hard like an Egg-ſhell, ſo that when the *Fly* comes out, a round Hole like a Door appears.

THE Silk-ſpinning *Caterpillars* are of various Kinds, and depoſit their *Aureliæ* in different Places, and in different Manners, *viz.* ſome faſten them on the Leaves and Stalks of Plants, without any Covering; others ſpin the Leaves over them; others lodge them in Holes and Crevices; and others in the Earth.

MANY of the *Moth-Kind* place their *Chryſalis* in the Earth, about an Inch or two deep, ſurrounding it with a Caſe of Earth lined with a glutenous Matter, that no Wet can penetrate: And what is very ſurprizing, notwithſtanding the extreme Delicacy and Tenderneſs of the *Fly* when firſt bred, be the Ground never ſo hard, it makes its way thorough it without ruffling a ſingle Feather.

FEW, if any, of the *Butterfly-Kind* form a Caſe or Spinning, except what faſtens the Tail and Body of the *Chryſalis*. Some hang perpendicularly downwards, and others in an horizontal Poſition, being faſtened by the Tail, with a Thread round the Back and on each Side. Some are ſecured within the Leaves ſpun together, others are hid in the Hollows and Barks of Trees; and others again under the Copings of Walls, in Houſes, Sheds, &c.

Of the FLY.

AFTER the *Chryſalis* has remained its due Time, the *Fly* burſts the Shell wherein it was contained, and comes out formed perfectly in every Part, except the Wings, which then appear too ſmall to cover its Body. In this naked Condition it crawls up to ſome convenient Place, where its Wings may hang down without any Hindrance: And when thus diſpoſed, the Wings begin to expand themſelves ſo much, that in the Space of half an Hour, the Wings (of *Butterflies*) are ſtretched commonly to their full Size; nay, even thoſe of the largeſt *Moths* ſeldom require above an Hour's Time. At firſt they are flabby, like wet Paper, but ſoon afterwards they become ſtiff, and capable of ſupporting them in their Airy Flights, &c.

In this *Fly* State their firſt Care ſeems to be the Propagation of their Species, for ſome of them will copulate immediately if they can find a Mate; to ſeek which the Male *Butterfly* takes Wing, as ſoon as his Wings are in a proper Condition: But few *Moths*, whether bred in the Night Time or in the Day, ever offer to fly till the Night after their Birth, when they go in Search of the Females.

THE Females (eſpecially of the *Moth* Kinds) ſeldom, if ever, take Wing till they have been cocked: they often continue in Conjunction twelve Hours and more, after which the Female lays her Eggs, flies about for a Time, and then dies.——The Females of ſome Kinds are without Wings.

THE Males (of ſome Species) have a ſurprizing Quickneſs and Diſtinction in their Senſe of Smelling, exceeding that of the Blood-Hound, or any other Creature yet known; for if a Female be concealed in a Box, and there are any Males within half a Mile or more, they will fly directly to the Place, and hover round it. By this Means a Dozen Male *Egger-Moths* have been taken in an Hour's Time, and that at about Twelve o'Clock at Noon, as may be ſeen in the Account of the *Egger-Moth.*

THEIR Continuance in the *Fly* State depends greatly on the Weather, many *Flies* being deſtroyed as ſoon as bred, by Storms of Hail, *&c.* but if the Seaſon proves favourable, many will live for a Fortnight, three Weeks, or longer, and ſome even all the Winter through.

The Diſtinction of MOTHS and BUTTERFLIES.

MOTHS and BUTTERFLIES agree in their Progreſſion from the *Egg* to the *Fly* State, are different when in that State, in the following Particulars.

BUTTERFLIES have a Ball or Knob at the Extremity of each of their *Antennæ*, or *Horns*.

THE Horns of MOTHS have not ſuch Balls or Knobs, but are conſtantly threaded or pointed: except the Males of ſome Species, whoſe Horns are ramified, or in the Form of Combs.

ALL BUTTERFLIES ſettle with their Wings erect, and generally keep them in that Poſture, unleſs when basking in the Sun.

MOST MOTHS do not ſettle with their Wings erect, but place them horizontally, or inclining to their Feet.

ALL BUTTERFLIES come abroad by Day-Light, and chiefly when the Sun ſhines bright.

MOTHS fly, ſome by Day-Light, ſome by Twilight, and ſome in the Dead of Night.

N. B. THERE is a Species of *Fly* betwixt the *Moth* and the *Butterfly*, whoſe Horns are more flat and hollow; this is deſcrib'd in the ſecond Book of this Work, by the Name of the *Burnet.*

Concerning the Food of the FLY.

THE Food of theſe Creatures in the *Fly* State, is very different from what it was when they were *Caterpillars*: *Butterflies* feed on all Kinds of Flowers, and on ſeveral ſorts of Fruits, and I have ſeen them extremely fond of the Juices that iſſue from the Bodies of ſeveral Sorts of Trees.

INTRODUCTION.

MOTHS feed on the ſame Things, as alſo on the Honey-Dew that is ſound on the Leaves of Limes, Elms, *&c.* The *Moths*, as well as the *Butterflies*, are furniſhed with a long Proboſcis, or Tongue, which lies curl'd up like a Watch-Spring, under the fore Part of the Head. The Length of this Proboſcis varies according to the Species of the *Fly*, and is from half an Inch, to four Inches long.

The Enemies of *Moths* and *Butterflies*.

NATURE has been ſo abundant in the Production of theſe Creatures, that were it not for the many Dangers they are expoſed to, through every Stage of their Lives, the whole World would be too ſmall to contain their Offspring, in four or five Years; for, upon Calculation, the Progeny of one Pair of large *Butterflies*, (ſuppoſing them to lay only 100 Eggs, whereas many of them lay 2 or 300, and that twice a Year) would be ſufficient to cover the whole Kingdom of *England* in about twelve Years.

WHILE in the Egg, they are devoured in great Numbers by Birds and other Animals.

WHILST *Caterpillars*, they are a Prey to ſmall Birds of all Kinds, being almoſt the only Food wherewith ſuch Birds nouriſh and rear their young ones.

CATERPILLARS likewiſe kill and devour one another; and, beſides that, Numbers of them die in ſhifting their Skins, and in changing into the *Chryſalis* State. But the greateſt Enemy they have in this State, is the *Ichneumon Fly*.

IN the *Aurelia* State, ſuch as have no Caſe are a Prey to Birds, *&c.* thoſe in the Earth, to Moles, Mice, and other ſubterraneous Animals; and beſides, great Numbers are deſtroyed by Froſts and Wet. In the *Fly* State they are a Prey to Birds, Batts, and many other Creatures.

THERE are four different Ways, in one or other of which all Animals of the *Moth* or *Butterfly-Kind* ſubſiſt, during the Winter Seaſon, *viz.*

1. SOME in the Egg State.
2. SOME in the *Caterpillar* State.
3. SOME in the *Chryſalis* State.
4. AND ſome in the *Fly* State.

IT is likewiſe to be obſerved, that the ſeveral Species of them chuſe different Places for their Reſidence

1. SOME frequent Woods.
2. SOME Plains and Heaths.
3. SOME Hedges and Thickets.
4. SOME Meads, and Mowing Graſs.
5. AND others marſhy wet Grounds, *&c.*

SEVERAL

INTRODUCTION.

SEVERAL Kinds of *Caterpillars* come forth of the Egg in *July*, *Auguſt*, *September*, and *October*, remain in the *Caterpillar* State all the Winter, feed up in the Spring, then change into the *Chryſalis* State, and produce *Flies* a few Weeks afterwards.

OTHERS there are that continue in the Egg State all the Winter, are hatched in the Spring, and feed up in about 45 Days: then change into the *Chryſalis*, and produce their *Flies* in about 14 Days afterwards.

N. B. THE Curious may be aſſured, that all theſe Obſervations are founded on real Facts, and not on any Suppoſition or Conjecture.

AND now, (as it ſeems exactly ſuitable to this Work) we ſhall beg Leave to cloſe the Introduction with a ſhort Deſcription of the *Butterfly*, taken from a Poem called The UNIVERSE, which was written ſome Years ago
By Mr. *Henry Baker*.

SEE, to the Sun the Butterfly *diſplays*
Its glittering Wings, and wantons in his Rays:
In Life exulting, o'er the Meadows flies,
Sips from each Flow'r, and breathes the vernal Skies.
Its ſplendid Plumes, in graceful Order, ſhow
The various Glories of the painted Bow.
Where Love directs, a Libertine it roves,
And courts the fair ones thro' the verdant Groves.
How glorious now! How chang'd ſince Yeſterday!
When on the Ground, a crawling Worm it lay,
Where ev'ry Foot might tread its Soul away!
Who rais'd it thence? And bid it range the Skies?
Gave its rich Plumage, and its brilliant Dyes?
'Twas God *:----* *Its* God *and thine,* O Man, *and* He
In this thy Fellow-Creature lets thee ſee,
The wond'rous Change which is ordain'd for thee.
Thou too ſhalt leave thy reptile Form behind,
And mount the Skies, a pure ethereal Mind,
There range among the Stars, all bright and unconfin'd.

An *Account* of thoſe *Places* where ſome GENTLEMEN

OF THE

AURELIAN SOCIETY

Have been uſed to collect *Caterpillars*, *Chryſalides* and *Flies*,

In the following Months of the Year.

MARCH

FROM the 15th to the 25th of this Month, a *Moth* called the *Orange Under-Wing*, may be taken in *Hornſey*-Wood, and in the Fields cloſe to the Sides thereof. It flies in the Day-time, is an exceeding pretty *Moth*, and not to be met with in ſuch Plenty any where elſe, that I know of. The *Oak-Beauty*, and ſome other *Moths* are bred in this Month, but are rarely met with in the *Fly* State.

APRIL.

IN this Month a great Variety of *Caterpillars* and *Chryſalides* may be taken by the Method already deſcribed. The Banks about the *Chelſea* Water-Works and ſuch-like Places are moſt likely to furniſh the *Chryſalides* of the *Hawk Tribe*.

At the Roots of the *Elm*, *Lime*, *Willow*, and *Poplar Trees*, you will find in this *Month* a Variety of *Aureliæ*, which will produce their *Flies* in the *May* and *June* following.

Be now diligent to collect *Caterpillars* from all kinds of Growths, which, if taken Care of, will produce their *Flies* a few Months hence. Towards the End of this Month ſome *Flies* may be taken in the Day-time, and ſome *Moths* in the Evening.

MAY.

THIS delightful Month brings forth in the Woods and Meads a ſurpriſing Variety of *Flies*. *Hornſey*, *Cain*, and *Tottenham* Woods; the Woods near *Southgate*; *Hanging* Wood, by *Charlton*, in *Kent*; *Oak of Honour* Wood, by *Dulwich*; *Comb* Wood, by *Kingſtone*, in *Surrey*, and the Fields adjacent are all frequented by them in this Month in the Day-time as well as in the Evening; and if the Weather be fine you will never fail of Sport. Abundance of different *Caterpillars* are likewiſe to be found at this Time, ſuch as thoſe of the *Emperor-Moth*, *of the Lappit*, *Drinker*, *Egger*, and of Numbers of other Sorts.

JUNE.

THIS Month adds greatly to the Number of *Flies* bred in *May*.—From the 20th to the 30th are uſually produced: in *Southgate*, *Comb*, and *Oak of Honour* Woods, the *Great Fritillary* and other fine *Butterflies*, with Plenty of *Moths*; all which may be taken in and near the Woods already mentioned.

J U L Y.

THE firſt ten Days in this Month are the Time for taking the *Purple Emperor-Butterfly* in *Comb* Wood; and the Fields adjacent can furniſh ſuch a charming Variety of *Moths* and *Butterflies*, that I do not know any Place where an *Aurelian* can ſpend a Week with more Satisfaction and Aſſurance of Succeſs. As ſoon as the *Purple Emperor-Butterfly* begins to grow bad, the Time comes on when the ſecond Breed of the *Swallow-tail Butterfly* is quite freſh, as alſo the *Great Tortoiſe-ſhell*, *Peacock Butterfly*, &c. About the Middle of this Month you may find the *Great Red Underwing* and the *Goat-Moth* ſtanding againſt the *Willow-Trees* which uſually grow by the Sides of Ditches about the old Barge-Houſe, *Rotherhith*, *Vauxhall*, and likewiſe in other Places. Seek alſo for the *Caterpillars* that produce the *Great Elephant* and *Gold-Spot Moths*: the moſt certain Places to find which, that I know of, are by the Sides of the Ditches in *Rotherhith* Marſhes. The *Caterpillars* that produce the *Elephant Moth* feeds on the *White Ladies Bedſtraw*, thoſe of the *Gold-Spot* on the *Great Water-Graſs*. I have taken the *Gold-Spot Chryſalis* and *Caterpillar* likewiſe in the low Grounds by *Vauxhall*, in *Surry*.

A U G U S T.

AT the Beginning of this Month may be found amongſt the *Willows*, about the Banks by the *Chelſea* Water-Works, the *Caterpillars* that produce the *Eyed-Willow* and *Poplar-Hawks*, alſo the *Buff-Tip-Puſs*, &c. and from the 20th to the 30th the *Admirable Butterfly*, &c.

S E P T E M B E R.

IF this Month proves fine, a great many ſcarce *Moths* are to be taken in the Evenings, and the ſecond Brood of the *Comma-Butterfly*, as well as ſome other *Flies*, preſent themſelves. *Caterpillars* are likewiſe to be got in Plenty off the *Oak*, *Black-Thorn*, and a Variety of other Foods; and theſe, if taken Care of, will produce ſcarce and valuable *Flies* in the ſucceeding Spring. From the End of this Month to the Middle of *March* there are but few *Flies* that frequent the Fields; altho' I am of Opinion that ſome *Moths* are bred in every Month of the Year.

In order to oblige ſuch Perſons as may be deſirous
To make a COLLECTION of

MOTHS and BUTTERFLIES,

Though unacquainted with the Manner how,
It is judged proper to lay down the following

DIRECTIONS.

PROVIDE yourſelf with a **Net** made of Muſchetto Gauſe, and in Shape like a Bat-fowling Net; let its Length be one Ell, the Width at Bottom three Quarters of a Yard, at Top half a Yard, and cut circular; this muſt be ſewed to a Tape or Ferret, that it may be faſtened to a couple of Haſle or other Sticks five Feet long each, the upper Part whereof ſhould be bent circular to fit your Net.

You muſt likewiſe have a Stick of Haſle, or any other Wood, about five or ſix Feet in Length, wherewith to put the *Flies* and *Moths* on the Wing, by beating the Boughs, Hedges, Shrubs, or other Growths you are near, ſo that you may be better able to ſee and take them.

Furniſh yourſelf likewiſe with Boxes of ſuch Sizes as will go into your Pocket, let them be lined at the Top and Bottom with Cork; be alſo provided with a Pin-cuſhion, well ſtock'd with different Sorts of Pins.

Theſe Things being in readineſs, go into the Woods and Fields thereto adjacent (always placing yourſelf where the Sun has moſt Power, and the Wind the leaſt) alſo into Chalk-pits, rough Grounds, Lanes, *&c.* In all which Places, if it is a fine Day, and a proper Seaſon of the Year, you'll find Plenty of Sport.

When you have taken a *Fly* in your Net, lay the Net flat on the Ground, which will prevent the *Fly* from fluttering; then put the Fore Finger of your Left Hand under the *Fly*, and with the ſame Finger of your Right Hand give it a ſqueeze on the Back or Cheſt, and that will kill it; be careful, however, not to preſs too hard, leaſt you damage the *Fly*. This done take a Pin and run it through the Body, betwixt the Wings, letting that Side be uppermoſt which is moſt beautiful; then ſtick it in your Box, and look for more Sport.

Having collected ſuch a Number of *Flies* as you think proper, and being returned home, look into your Boxes, and obſerve which of them are fit to ſet: ſuch as you find dead and not ſtiff are ſo.

Then (having prepared before-hand two or three Boards covered with Cork, of about ten Inches by ſixteen in Size, or as you find moſt convenient to place your *Flies* in order on and extend their Wings in the beſt manner: by the Aſſiſtance of little Braces made by cutting a Card into Lengths or Slips, with a ſmall Pin thruſt through the End of each) proceed to manage them as follows:

Take a *Fly* out of your Box: ſee if the Pin be run through it perpendicularly: if ſo, ſtick it on one of your ſetting Boards, and with the Point of a Needle (which muſt be fixt into a ſmall Stick, or what elſe you like beſt) extend one Wing leiſurely, till ſuch Time as the Point thereof is even with the Noſe of the *Fly* you are ſetting. That done, fix one of your Card Braces gently on that Wing, to prevent its giving way; ſerve the other Wing in the ſame manner, and your *Fly* will appear extended as in the Paintings. Let the Braces remain on the Wings of *Butterflies* a Fortnight, on thoſe of great *Moths* a Month. Take Notice, however, that a great Number of ſmall *Moths* muſt be ſet in your Boxes in the Field, otherwiſe your labour will be loſt; you'll preſently know which theſe are, by obſerving them to be dead and almoſt ſtiff; ſo that it is proper to carry always about you a little Box of Card Braces for this Purpoſe.

The Way to preſerve your Flies, *after you have taken them from your Setting Board.*

If you put them in Drawers, Boxes, or Frames with Glaſſes before them, its proper to get ſome Camphire, which incloſe in ſmall Muſlin Bags, and faſten it to thoſe Places where your *Flies* are; by this Means you will deſtroy thoſe Inſects that would otherwiſe injure your *Flies*; and by renewing now and then this Method, I am convinced your *Flies* may be preſerved ſeveral Years. The Months in *England* that produce the greateſt Variety of *Flies*, are *April*, *May*, *June*, *July*, and *Auguſt*, eſpecially of the *Butterfly* Kind; and for *Moths*, I am of Opinion, that there are many different Species produced all the Year round. The beſt Time to take the greateſt Variety of *Moths*, is for one Hour after Sun-ſet, and the propereſt Places are in and by the Sides of Woods, Gardens, Green Lanes, *&c.* where with your Net you'll ſeldom fail of Sport. Thus much ſeemed neceſſary to ſay in Reſpect to taking *Inſects* in the *Fly* State, and more would be ſuperfluous.

But as it may be agreeable to ſome to breed the Flies *themſelves from the* Caterpillars, *I ſhall likewiſe give the beſt Inſtructions I am able for that Purpoſe.*

IN the Spring and Autumn Seaſon you may collect great Variety of *Caterpillars*, by ſpreading a Sheet under *Oak-Trees:* then beating the Boughs, many *Caterpillars* will fall, which if taken Care of, will produce ſcarce and valuable *Moths*; you may alſo obtain by the ſame Means *Caterpillars* from the *Black-Thorn*, *White-Thorn*, *Bramble*, *Chick-weed*, *Willow*, and many other Growths.

When you have collected a Number of *Caterpillars*, and remark'd the Food you found them on, put them into Boxes, which prepare as follows: Take a Deal or Wainſcot Box, cut a large Square out of the Top and Bottom, cover the Place cut out with a Piece of Crape Hatband, glewing the ſame all round to prevent any Eſcape. This done, put your *Caterpillars* into the Box, with ſome of the ſame Food you found them on, giving them, if you can, freſh every Day. Here you'll find them feed and thrive; and after changing their Skins (ſome five and ſome ſix Times) they will go into the *Aurelia* State, and there remain for a certain Time, ſome much longer than others; but in about fourteen Days from this laſt change you may look into your Boxes, to ſee if you have any *Flies* bred; remembring that out of ſuch as are produced in this manner, much more perfect *Flies* may be choſen, than any that can be caught; and as ſeveral Sorts of *Caterpillars* go down into the Earth, and there change to *Chryſalis*, ſome Earth muſt be put into the Boxes for that Purpoſe, at leaſt two or three Inches deep. Never take the *Chryſalides* out of the Earth, nor diſturb them till the *Flies* are bred.

There is yet another Thing proper to be known, in order to compleat your Collection. A great Number of *Caterpillars* go into the Earth, and there change to *Aureliæ*, whoſe *Moths* are ſeldom upon the Wing till Night; theſe *Aureliæ* are to be got by digging with ſuch a Trowel as the *Bricklayers* uſe, about the Roots of Trees, ſuch as *Oaks*, *Elms*, *Limes*, *Poplars*, *Willows*, &c. alſo by the Sides of Walls and Pales. The uſual Time to dig for them is from *September* to *March*.

When you have obtain'd a Number of *Aureliæ* by digging, you muſt provide for them thus: Get ſome Earth and ſcowering Sand, mix them well together, and put the Mixture into ſome large Garden Pots; lay your *Aureliæ* thereon, covering them with Moſs; then ſew a Piece of Crape Hatband round a ſmall Hoop, and put ſuch a Cover on each Pot, in order to receive the *Flies* when bred, which will uſually be in the Months of *March*, *April*, *May*, and *June*. I have always kept my Pots of *Aureliæ* out in the open Air, and the *Flies* have been produced with great Succeſs; however it may be proper to place a Piece of Board over each Pot, to prevent unforeſeen Accidents.

Thoſe who think proper to put theſe Directions in Practice, will, I am convinced, in a ſhort Time, be poſſeſſed of a great Number of valuable *Flies*. What Food the *Caterpillars* mentioned in this Work chuſe to feed on, the Time when they change into *Aureliæ*, and when they iſſue forth in the *Fly* State, may be ſeen in the Deſcription of each Plate.

ERRATA.

Page.	Num.	Read.	Inſtead of
8	XVII	Chryſalis	Chryſaliſis
11	VI	nigra	alba
18	II	Cl. 3. S. *A*. 2.	Cl. 3. S. E. 1.
20	VII	form	from
23	XIII	to	o
49	I	Sect. a.	
51	V	Cl. 2. S. a. 5.	Cl. 2. S. *a*. 2.
52	I	4 The Great Fox-tail Graſs.	
53	IV	Cl. 2. S. b. 4.	Cl. 2. S. *a*. 4.
62	III	Cl. 1. S. *a*. 3.	Cl. 1. S. *a*. 2.
63		of Butterflies	of Caterpillars
		On the Plates.	
38	I	Cl. 1. S. b. 1.	Cl. 1. S. *a*. 1.
38	II	Cl. 1. S. b. 2.	Cl. 1. S. *a*. 2.
42	I	Cl. 2. S. *a*. 1.	Cl. 2. S. 1. b. 1.
42	II	L. I. Ch. III.	L. I. Ch. II.
62	II	Cl. 1. S. *a*. 2.	Cl. 1. S. *a*. 1.

A

A Synoptical TABLE of the *Moths* and *Butterflies* contained in this Work.

- CATERPILLARS.
  - Producing Moths.
    - Having circular Rings or Joints.
      - Naked.
        - Without Protuberances.
          - THE great yellow Under-wing. The Wild Arrach. The Angle Shades. The Peaſe Bloſſom. The ſmall green Oak Moth. The ſmall Ermine Moth. The Broom Moth. The ſallow Moth. The Codling Moth. The Province Roſe Moth. The Scallop-wing'd Oak Moth. The Black-thorn Moth. The green Moth with ſilver Lines. The Ranunculus Moth. The Water-Betony Moth. The ſmall Elephant Moth. The Gold-ſpot Moth. The Sword-graſs Moth.
        - With Horns on the Tail.
          - The Jeſſamine-Hawk Moth. The Unicorn, or Bindweed-Hawk Moth. The Privet-Hawk. The Olive-ſhades, or Lime-Hawk. The Eyed Willow-Hawk. The Poplar-Hawk. The Ladies Bedſtraw, or Elephant Moth.
        - With one Protuberance on the Rump.
          - The Ealing's Glory.
        - With two or more Protuber.
          - The Ozier, or Pebble Moth.
        - With Shoulders riſing into an Angle.
          - The Puſs Moth. The Wild Roſe Moth.
      - Having little Hair.
        - Without Protuberances.
          - The Goat Moth. The Emperor Moth. The Plumb Tree Moth.
        - With Protuberances.
          - The Willow Red-Underwing.
      - Having much Hair.
        - Without Protuberances.
          - The Great Tyger. The Cream-Spot Tyger. The Scarlet Tyger. The Black Arches. The Great Ermine Moth. The Spotted Buff Moth. The Gipſey Moth. The Buff Tip. The White Sattin Moth. The Lacquey. The Great Egger. The Graſs Egger. The December Moth. The Spotted Red and White Underwing. The Wood Tyger. The Mother of Pearl Moth. The Yellow July Oak Moth. The ſmall Egger. The Fox-coloured Moth.
        - Having Rings of different Colours.
          - The Cinnabar Moth.
        - Having indented Marks:
          - The Bramble Moth.
        - Having fleſhy Protuberances on the Head, Back, or Tail.
          - The Lappit Moth. The Drinker. The Yellow Tail. The Dagger Moth. The Wild Pine Tree Lappit Moth.
        - Having many Tufts of Hair.
          - The Black Tuſſock. The Yellow Tuſſock. The Red Spot Tuſſock. The Orange Tuſſock. The Nut-Tree Tuſſock, The Sycamore Tuſſock.
    - Half Loopers.
      - Having 8 Feet, 2 Holders, 6 Claws, and with Protuberances.
        - The Crimſon Underwing.
      - Having 4 Feet, 2 Holders, 6 Claws. Hairy.
        - The Silver Y Moth.
    - Loopers.
      - Naked.
        - Without Protuberances.
          - The Brindled Beauty. The July Arrach Moth. The Mottled Umber. The July Sallow Moth. The Buff Argus. The Green Broom Moth. The Lime Moſs Moth.
        - With Protuberances.
          - The Spotted Elm Moth. The Swallow Tail Moth. The October Moth. The Brimſtone Moth. The Scallop-winged Moth. The Richmond Beauty. The Hawthorn Moth.
      - Hairy.
        - Without Protuberances.
          - The large Magpye, or Curran Moth. The Gooſeberry Moth.
        - Having Tufts of Hair.
          - The Brindle Moth.
    - Shaped like Wood-lice.
      - Small Oak Egger Moth.
  - Producing Moths whoſe Generation is unknown.
    - Glory of Kent. Cleifden Nonpareil.
  - Producing Flies between the Moth and Butterfly.
    - The Burnet Moth.
  - Producing Butterflies.
    - Smooth.
      - Without Protuberances.
        - Swallow-Tail Butterfly. Brimſtone Butterfly.
    - Having little Hair.
      - Producing round-winged Butterflies.
        - White Butterfly with black Veins. Large white Garden Butterfly. Small white Garden Butterfly. White Butterfly with green Veins. Orange Tip, or Lady of the Woods.
      - Producing ſcallop-wing'd Butterflies.
        - The Marmoris, or Marble Butterfly. The Meadow Brown. The Great Argus, and Wood Argus.
      - Producing Butterflies with large Heads and Bodies.
        - The Grizzled Butterfly.
    - Armed with Spikes.
      - Whoſe Chryſalis hangs by the Tail.
        - The Admirable Butterfly. The Peacock Butterfly. The painted Lady. The great Tortoiſe Shell. The Comma Butterfly. The Great Fritillary. The Plantain Fritillary. The Heath Fritillary. The Willow Butterfly. The ſmall Fritillary. The great Fritillary, with ſilver Spots.
    - Shaped like Wood-lice.
      - The Purple Hair-ſtreak Butterfly. The Brown Hair-ſtreak. The green Butterfly.
  - Producing Butterflies whoſe Generation is yet unknown.
    - The Blue Argus Butterfly. The Purple High-Flyer, or Emperor of the Woods.

THE

NAMES of the Subſcribers to, and Encouragers of,

Mr. WILKES's Attempt towards a NATURAL HISTORY of *Engliſh* MOTHS and BUTTERFLIES.

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His Grace the Duke of Athol.
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The Aurelian Society.
Mr. Stephen Auſtin.

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Miſs Jane Baniſter.
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Mr. Woodhouſe.
Mr. Whittle.
Mr. Ware.

Y.

The Honourable Mr. Yelverton, 3 Books.

BOOK I.

PART I.

The CATERPILLARS, *deſcribed in this Book, are ſuch as produce Moths; of which, as there is a great Variety, 'twas thought proper to range them under the following Heads or Chapters.*

CHAP. I.

THE CATERPILLARS belonging to this Chapter have ſix Hooks or Claws before, eight Feet in the middle, and ſome have, and ſome have not two Holders behind. Their Bodies are compoſed of twelve circular Joints, or Rings, conjoined by a common Membrane, which they are capable of contracting or expanding. When they would move along, they dilate the muſcular Skin that ſeparates the firſt Ring from the next; they advance the firſt Ring to a certain Diſtance, and then, by contracting and expanding the Skin of that Part, they move the ſecond Ring: the ſame Method moves the Third, and ſo the whole Body marches in Succeſſion: the Motion of their Feet and Claws correſponding with and aſſiſting the progreſſive Motion of the Rings. *Vide Spectacle de la Nature, Dial.* 1.

The CATERPILLARS under this Head may likewiſe be divided into three Claſſes:

I. NAKED or without HAIR.
II. Having little HAIR.
III. Having much HAIR.

The Firſt CLASS, *or the* NAKED *and without* HAIR, *may be ſubdivided in the following Manner.*

CLASS I.

Such CATERPILLARS *whoſe Bodies are* SMOOTH.

SECT. *A*.

Without Riſings, *or* Protuberances

L. I. CH. I. I. CL. I. S. *A*. I.

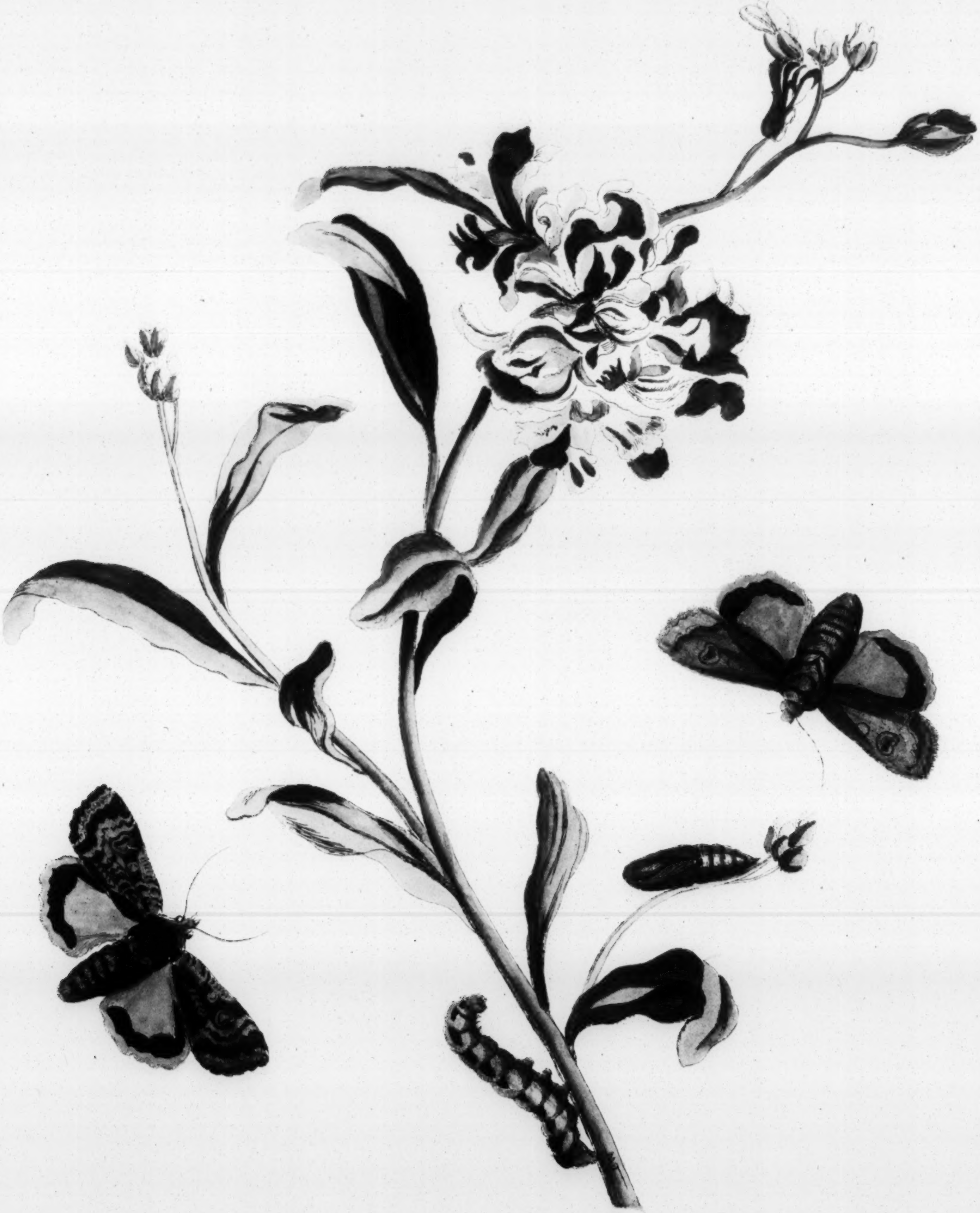
THE GREAT YELLOW-UNDERWING MOTH. The CATERPILLAR of this MOTH lives through the Winter, and comes to its full Growth in *May*: It is found in Gardens, and other Places, and uſually feeds in the Night, as many other of the NAKED CATERPILLARS do. Indeed, were they to do otherwiſe, they would ſoon be devoured by the Birds, which are much fonder of theſe SMOOTH CATERPILLARS than of the HAIRY ones. In the Day, they hide themſelves within the Earth, and in other ſecret Receſſes. They feed on the Leaves of the *Stock-July* and other Flowers, as alſo on Graſs, *&c.* They put on the *Chryſalis* Form, within the Earth, in *May*, and the *Moths* are bred in *June*. Great Plenty of this *Moth*, and other Species of the YELLOW-UNDERWING, were taken feeding on the Honey Dew, on the Limes and other Trees, in the Gardens of *John Philips*, Eſq; at *Layton* in *Eſſex*; they were diſcovered, by the Help of a Candle and Lanthorn, from Twelve o' Clock at Night till Two in the Morning; and were ſo fearleſs, that they would ſuffer one to take them with the Hand. At the ſame Time the ANGLE-SHADE and ſeveral other *Moths* were taken.

See *Liſter* on *Godartius*, *P.* 52. *N.* 41. *Albin*, *P.* 72. *Reaumur*, Pl. 14. Pag. 342. vol. 1.

The Double Stock July-Flower.

Leucoium incanum, majus, variegatum, flore pleno. C. B. Pin. 201.

L. 1. ch. 1.



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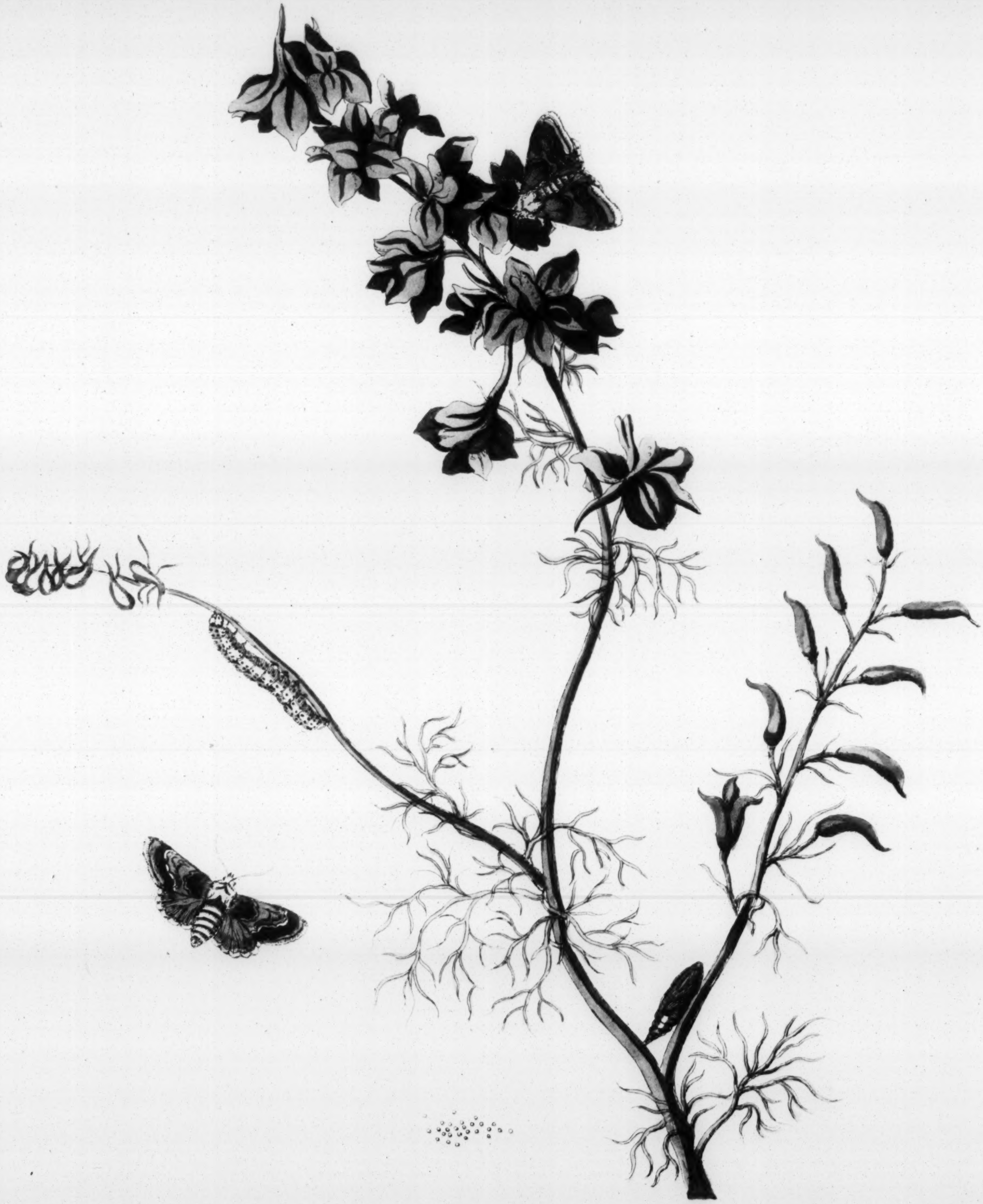

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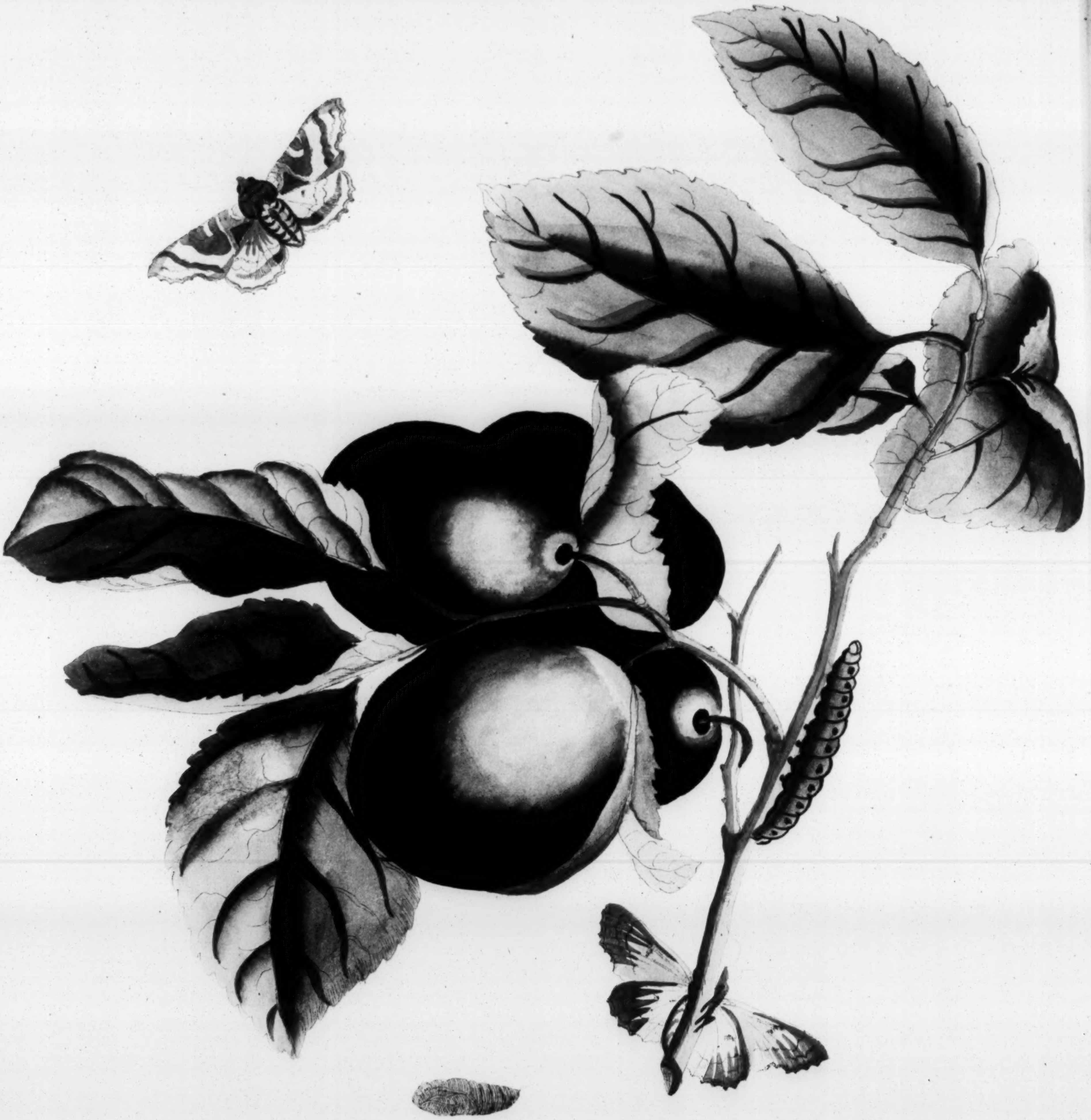

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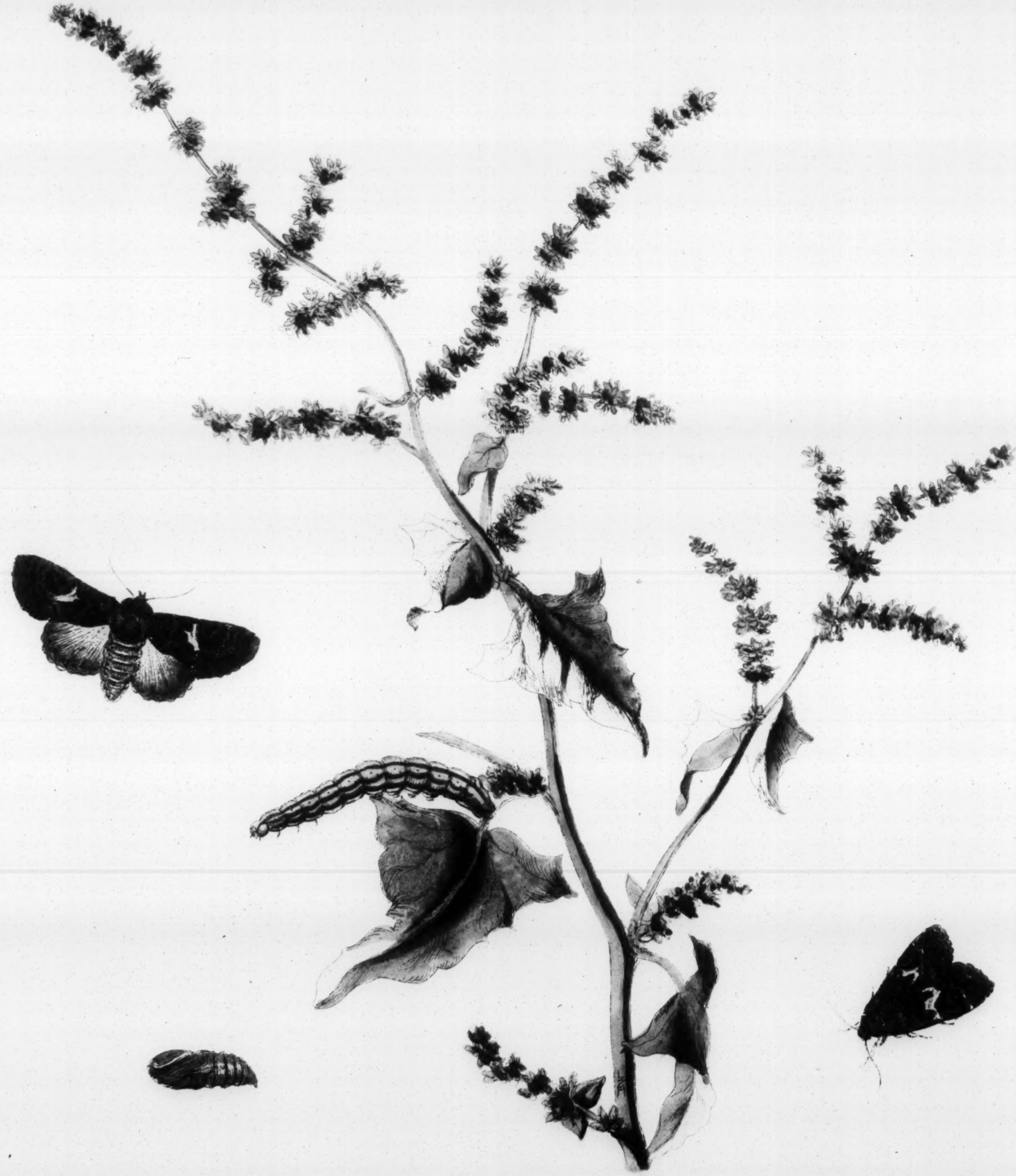


L. I. Ch. I. | Cl. I. S. *A.* 2.

II.

THE WILD ARRACH MOTH, Mr. *Roſel* ſays, The *Caterpillar* feeds on the WILD ARRACH; that it changes to a *Chryſalis*, within the Earth, in *September*, and that the *Moth* appears at the End of *May* following. I once took ſome of theſe *Caterpillars* feeding on the *Arrach* in *September*, but had not the good Fortune to breed any Flies from them. See *Roſel*, Cl. 2. Tab. 32.

The Wild Arrach in Flower.

Atriplex folio deltoide. Petiv. Herb.

L. I. Ch. I. | Cl. I. S. *A.* 3.

III.

THE ANGLE-SHADES, a *Moth*. It is adviſable to look for the *Caterpillar* of this Fly on Nettles, altho' ſome feed on Fruit Trees, Bramble Buſhes, *&c.* It goes into the *Chryſalis* State at the End of *June*, in a Web mixed with Earth, which it forms upon the Ground; and thus it remains till the Beginning of *September*, when the *Moth* is produced. There is an early Breed of this *Moth* in *May*, but, as I have not had the *Caterpillar* in the Spring, I cannot relate its Progreſſion. The Fly may be taken in the Evenings, in Gardens, feeding on the Flowers; but I have not met with them very frequent.

See *Godartius*, Part 1. Tab. 56. *Liſter* on *Godartius* P. 54. N. 44. *Albin*, Pl. 13. *Reaumur*, Pl. 8. P. 258. Pl. 14. P. 342. Vol. 1.

The Great Mogul Plum.

Prunus fructu magno ovato rubente. Tourn.

L. I. Ch. I. | Cl. I. S. *A.* 4.

IV.

THE PEASE-BLOSSOM, a *Moth*. Its *Caterpillars* are reported by *Merian*, and *Roſel*, to feed upon the wild Lark-Spur that grows amongſt Corn. They are full fed at the Beginning of *Auguſt*, when they change to the *Chryſalis*, but appear not in the *Moth* State till the *June* following. This Fly has been bred in *England* by the Honourable Mrs. *Walters*, and by *Nathaniel Oldham*, Eſq; but, at preſent, is very rare.

See *Merian*, Vol. 1. Ch. 40. *Roſel*, Cl. 2. Tab. 12.

The Lark-Spur.

Delphinium, hortenſe, flore majore & multiplici cæruleo. Tourn.

L. 1. CH. 1. V. CL. 1. S. *A*. 5.

THE SMALL GREEN OAK MOTH. The *Caterpillar* feeds on the Oak, and ſometimes ſuch Numbers of them are produced at the Beginning of *May*, that they, in a Manner, ſtrip the Oak-trees of their Leaves. They are enabled, by the Help of a Spining, which they faſten after the Manner of the Spider, to let themſelves down from one Bough to another, and from thence to the Ground, if they have a mind. They change into the *Chryſalis* State in a curled Form within the Oak-leaves, (which they wrap over them, and faſten together by their Web) and, after remaining ſo for about fourteen Days, the Fly is bred. If you beat the Branches of the Oak-trees you may take Plenty of this *Moth* in the Day-time.

The Yellow Strip'd Tulip

Tulipa hortenſis flore luteo variegato.

L. 1. CH. 1. VI. CL. 1. S. *A*. 6.

THE SMALL ERMINE MOTH. The *Caterpillar* that produces this *Moth* is as common as thoſe juſt mentioned. I have ſeen a Hedge-row of White-thorn, at the End of *May* and at the Beginning of *June*, the Leaves of which have been eaten almoſt up by theſe *Caterpillars*. They feed alſo on Black-thorn, Fruit-trees, &c. when they are preparing to change to *Chryſalis*, they get together in Numbers, and ſpin a large tranſparent Web, within which they faſten themſelves by the Tail, and undergo their Change. They remain in this Condition for about three Weeks: The *Moths* come forth in *June* and *July*, and are very common about moſt Hedges.

See *Albin*, P. 70. *Reaumur*, Pl. 12. Pag. 208. Vol. 2.

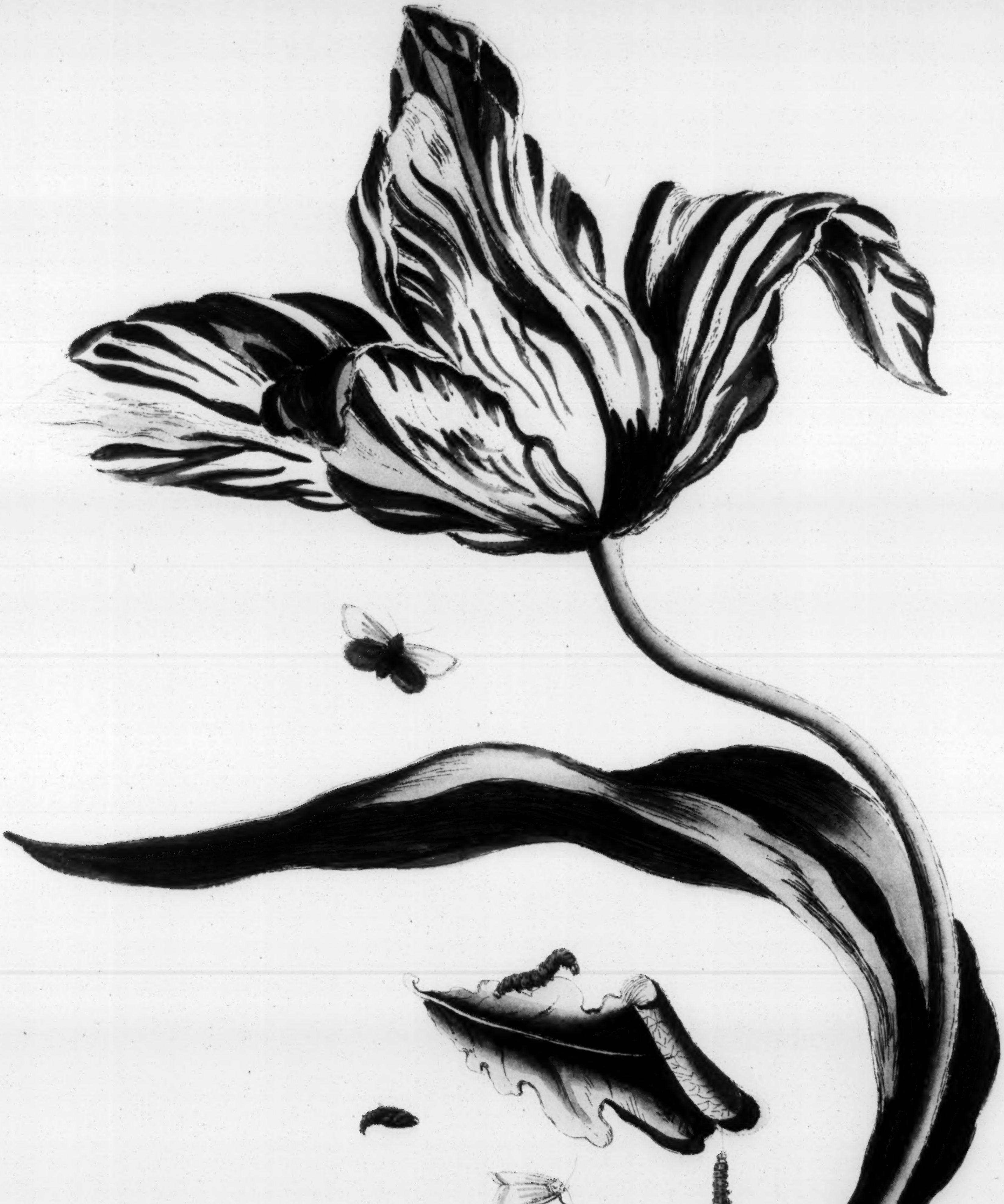
The Orange-Peach, with its Bloſſom.

Perſica, dura carne buxea. C. B. Pin.

L. 1. CH. 1. VII. CL. 1. S. *A*. 7.

THE BROOM-MOTH. The Food of this *Caterpillar* is the Leaves of Broom, on which I found Plenty of them, from the 20th to the 30th of *September*, near *Shooter's Hill* in *Kent*; they were of the Bigneſs expreſs'd in the Plate. The Green ones produced male Flies. They all went into the Earth at the Beginning of *October*, and, at the Beginning

V



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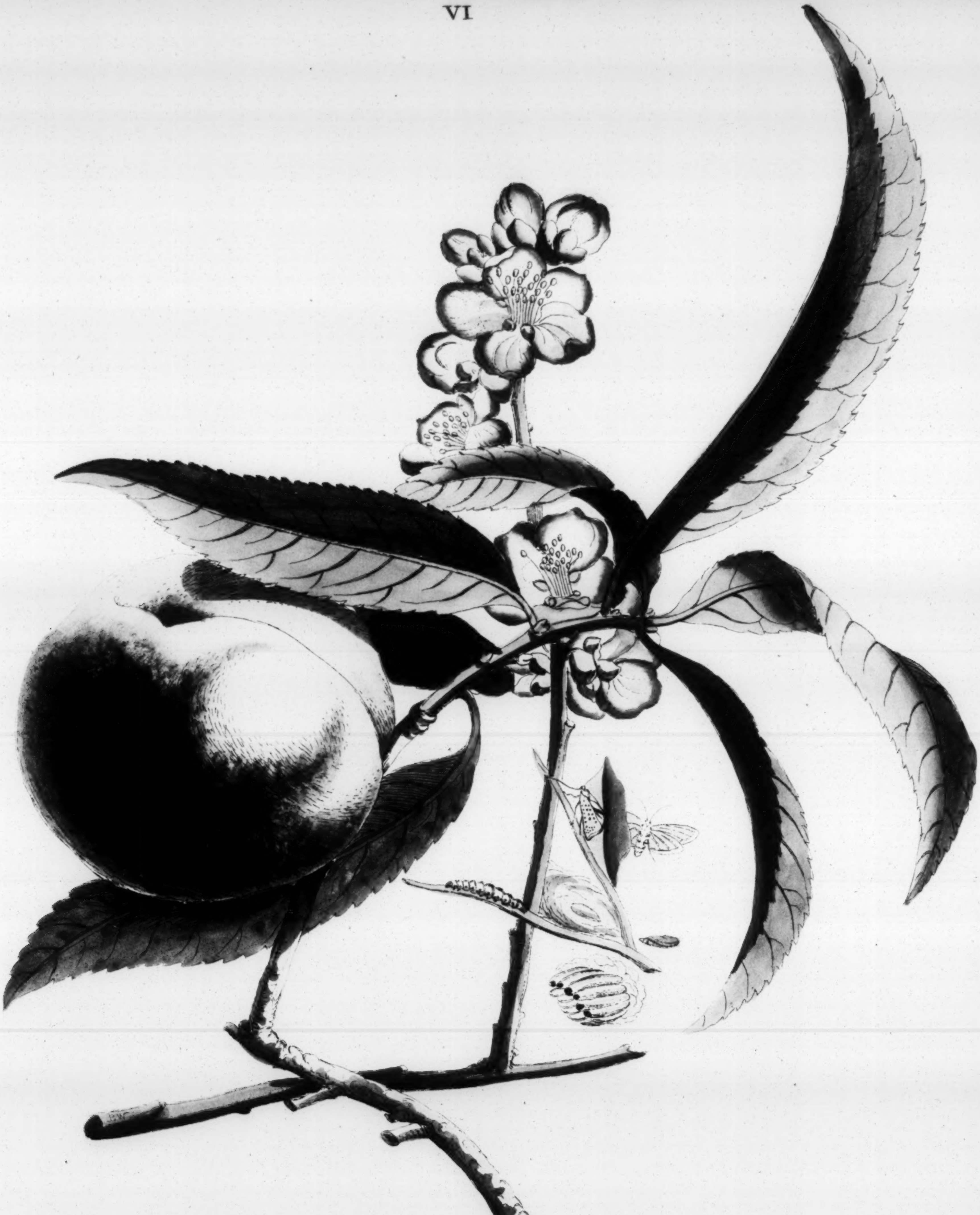
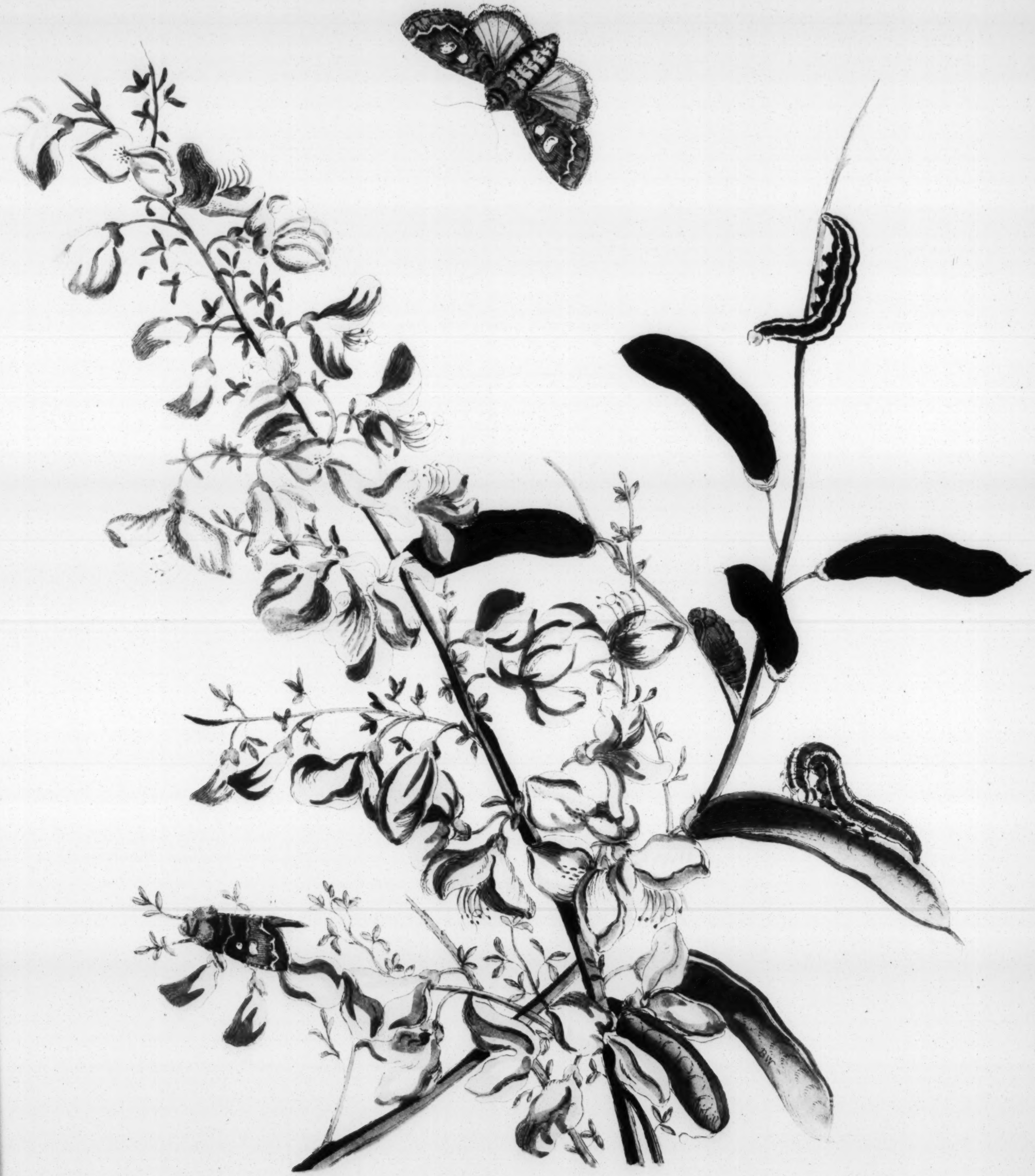


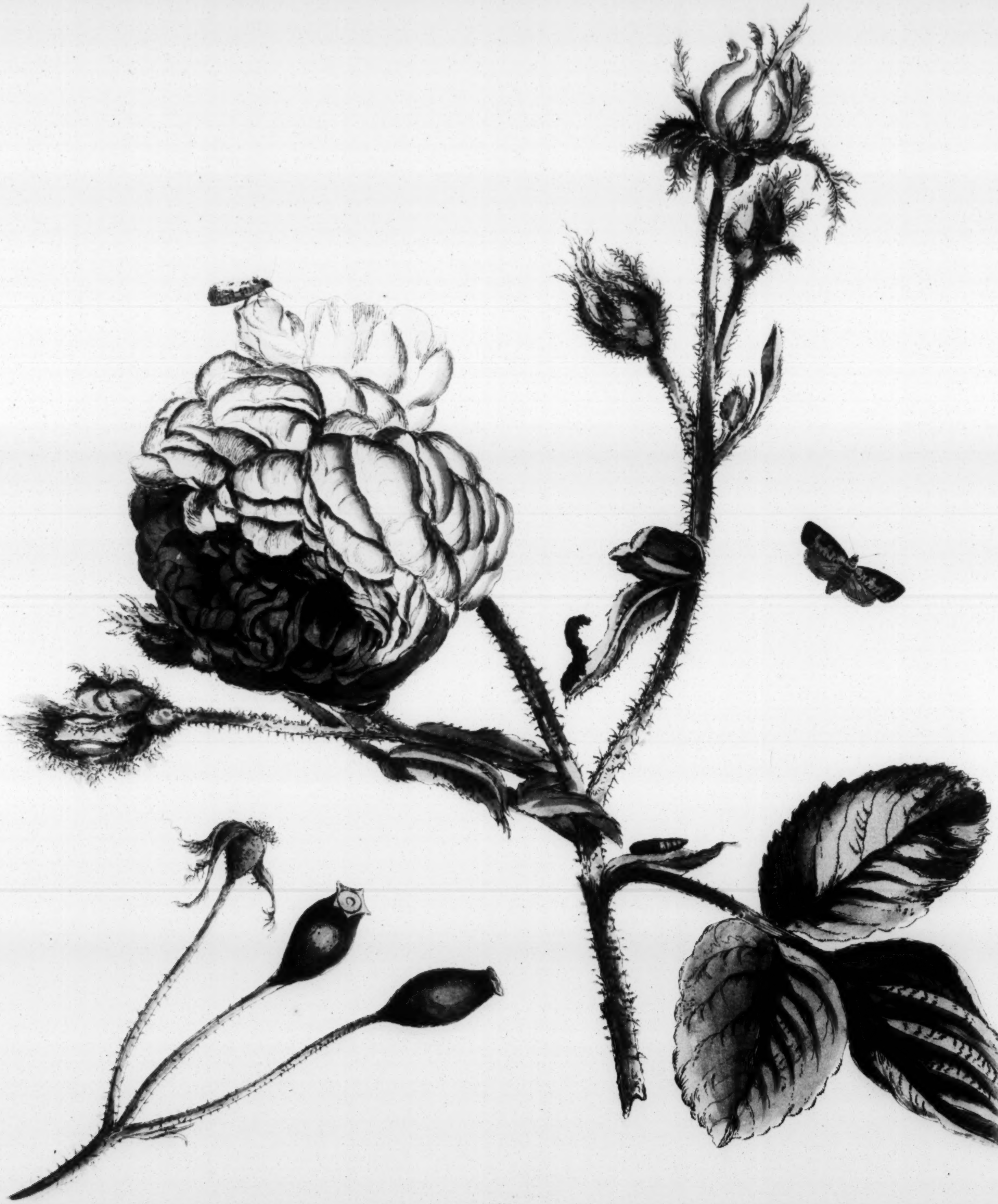
VII

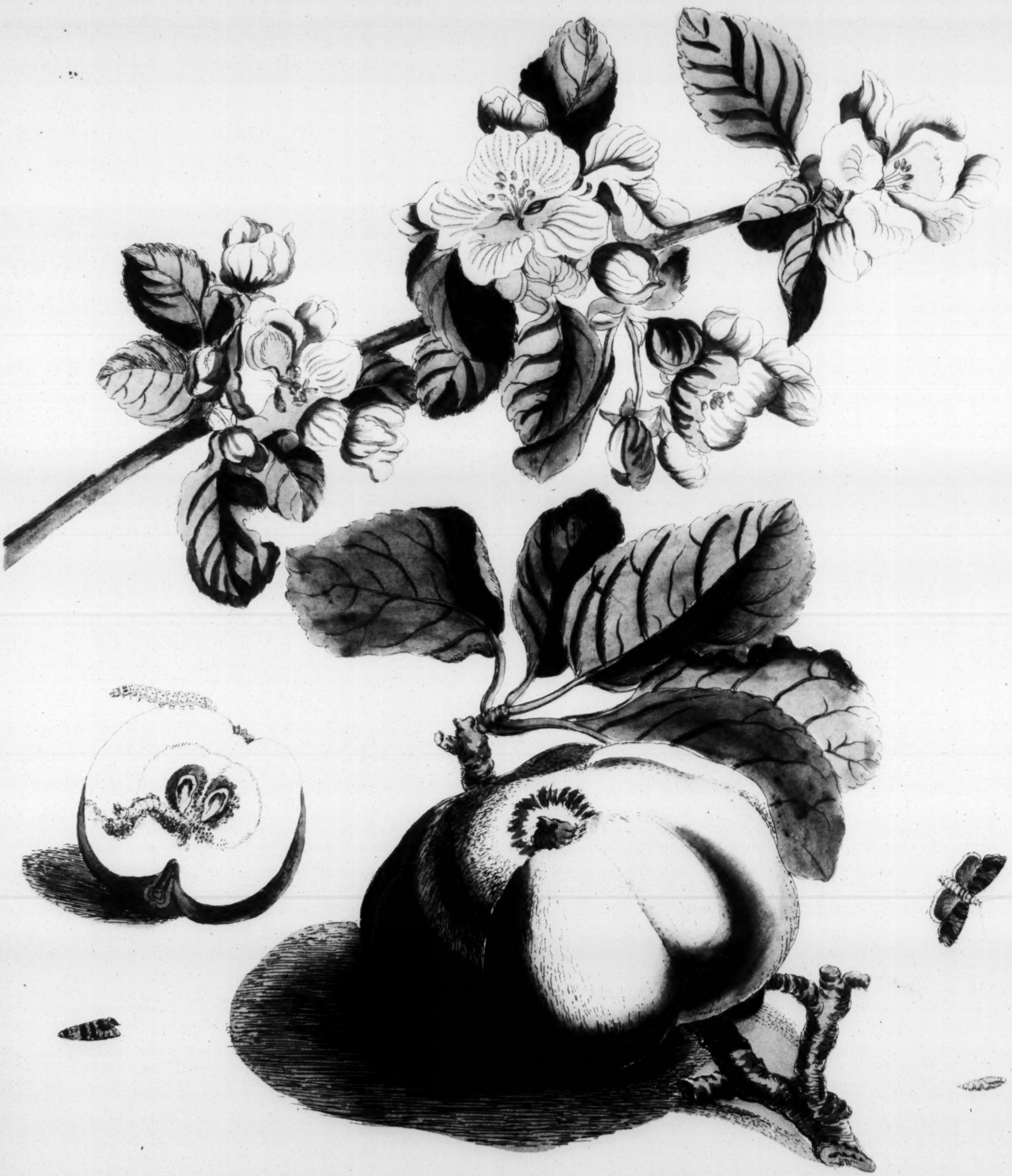
Cl.1. S. 17.



Pl. X. Tic

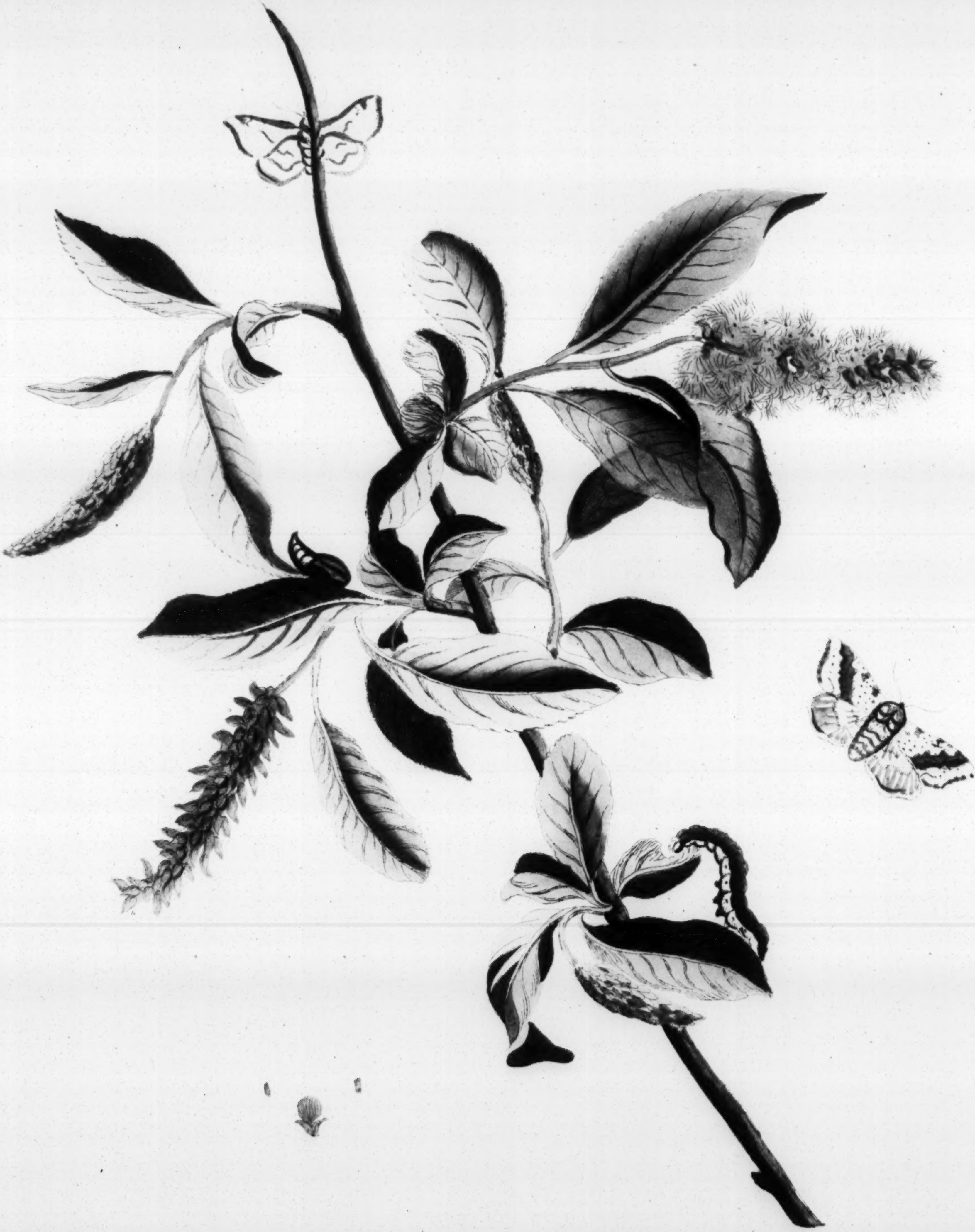
X





Cl. I. S. 18

VIII



ginning of *May* following, the *Moths* were bred. I never could take any of them in the Fly-ſtate.
See *Roſel*, Cl. 2. Tab. 52.

The Broom, in Flower and Seed.

Geniſta anguloſa Trifolia. I. B. 1388.

L. I. CH. I. VIII. CL. I. S. *A*. 8.

THE SALLOW MOTH. The *Caterpillar* was fed by Mr. *Dandridge* on the common Sallow, until it changed to a *Chryſalis* within the Earth, which was at the Beginning of *June*. The *Moth* was produced about the Middle of *September*. Theſe *Moths* are not common; for, in all my Practice, I have not been able to take above three or four, and that was in the Evening, near *Shooter's Hill*, in the Month of *September*. The *Caterpillars* are likewiſe very ſcarce.

See *Albin*, Pl. 33.

Common Sallow in Flower.

Salix Cutifolio rotundo. C. B. Pin.

L. I. CH. I. IX. CL. I. S. *A*. 9.

THE CODLING MOTH. Mr. *Roſel* ſays, The *Caterpillar* of this *Moth* ſeeds on the Kernels of Apples and Pears. The *Moth* lays her Eggs at the End of *June*: Eight Days after the *Caterpillars* are bred; and, when full fed, they go out of the Fruit and change to the *Chryſalis* under the Bark of the Tree. They remain there all the Winter, and the *Moths* are bred in *June* following. I have, myſelf, found Plenty of theſe Flies ſticking on the Bark of the Oak-trees, in *Richmond* Park, at the End of *June*, in the Day-time.

See R*oſel*, Cl. 4. Tab. 13.

The Codling-tree with its Bloſſom.

Pomum Coctile. Raii Hiſt.

L. I. CH. I. X. CL. I. S. *A*. 10.

THE PROVENCE ROSE MOTH. Roſe Leaves are the Food of this *Caterpillar*. In the Middle of *May* I had ſome of them that changed to the *Chryſalis* folded in the Leaves ; at the Beginning of *June* the *Moths* were bred. They may be taken in Gardens in the Evening.

See *Roſel*, Cl. 4. Tab. 9.

The Moſs Provence Roſe.

Roſa, Provincialis ſpinoſiſſima, pedunculo muſcoſo. Boerh. *Ind. alter.*

L. 1. Ch. 1. Cl. 1. S. *A.* 11.

XI.

THE SCOLLOP-WINGED OAK MOTH. I took the *Caterpillar* of this *Moth*, ſeeding on Oak-leaves, about the 10th of *June*, at which Time it went into the *Chryſalis*, ſpining itſelf up in a Leaf; and the *Moth* was bred on the 7th Day of *July*. Both *Moth* and *Caterpillar* are very ſcarce.

See Roſel, Cl. 2. Tab. 63.

The Yellow Roſe,

Roſa, Lutea, multiplex. C. B. Pin. 4831.

L. 1. Ch. 1. Cl. 1. S. *A.* 12.

XII.

THE BLACK-THORN MOTH, or, *Figure of* S. The *Caterpillar* is eaſily found, ſeeding on Black Thorn, White Thorn, Crab-tree, *&c.* towards the End of *May*, at which Time it ſpins a hard Caſe againſt its Food, and changes to a *Chryſalis*; the *Moth* is bred about the End of *Auguſt*, and is not commonly taken.

See *Albin*, P. 13. *Roſel*, Cl. 2. Tab. 16. *Reaumur*, Pl. 18. Pag. 342. Vol. 1.

The common Periwinkle.

Pervinca vulgaris anguſtifolia, flore pleno ſaturate purpureo. Tourn.

L. 1. Ch. 1. Cl. 1. S. *A.* 13.

XIII.

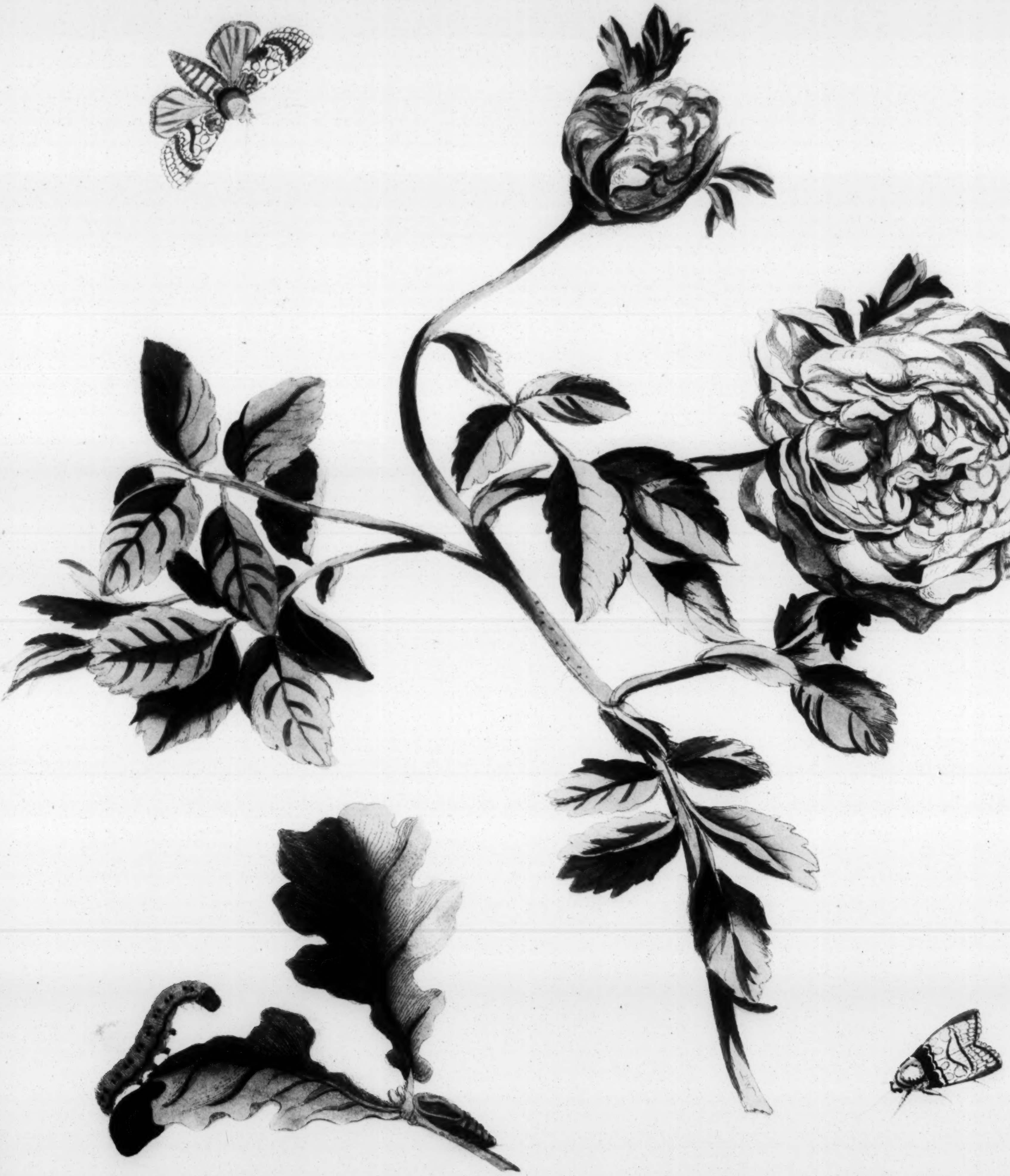
THE GREEN MOTH with SILVER LINES. I fed its *Caterpillar* with Oak-leaves, on which it had been found. It work'd itſelf up in a dark brown Caſe on the Back-ſide of one of the Leaves, and changed into a *Chryſalis* the 27th of *September*; the *Moth* appeared the 20th of *May* following, and is difficult to meet with.

See *Albin*, P. 31.

The Bruxells Apricock.

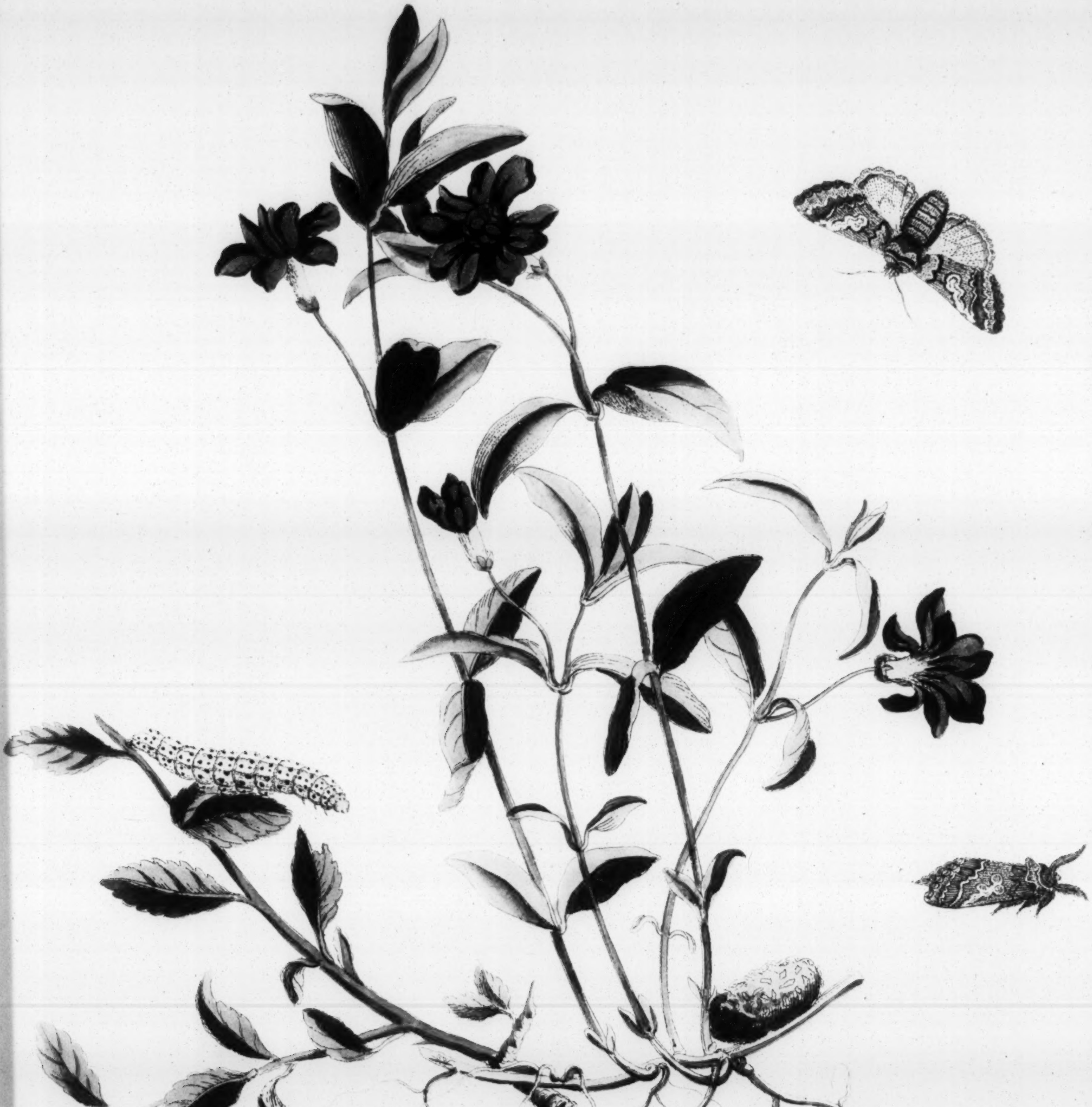
Malus Arminiaca, Bruxells vulgo dicta.

XI



XII

Cl. 1. S. 1.



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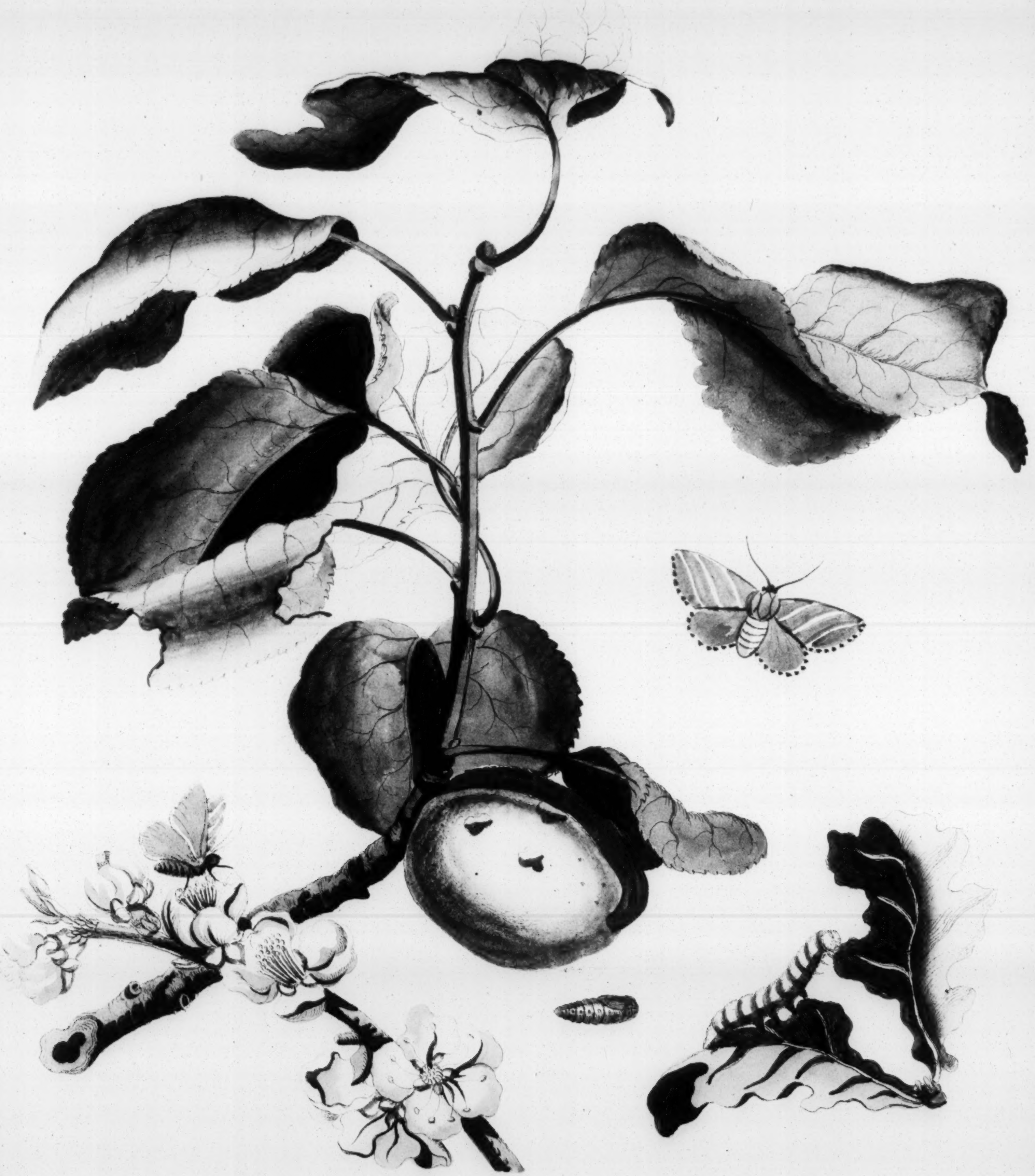

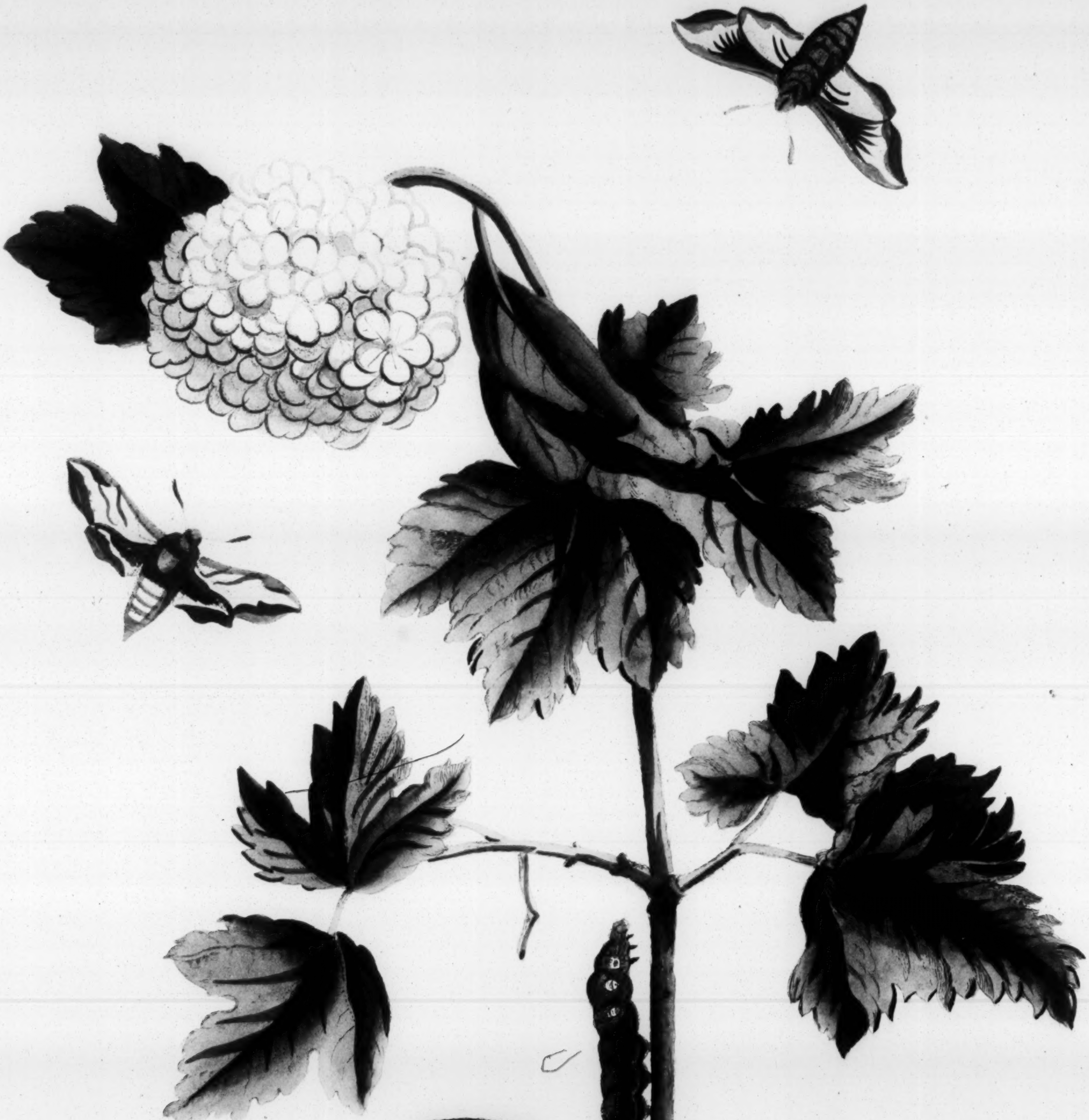

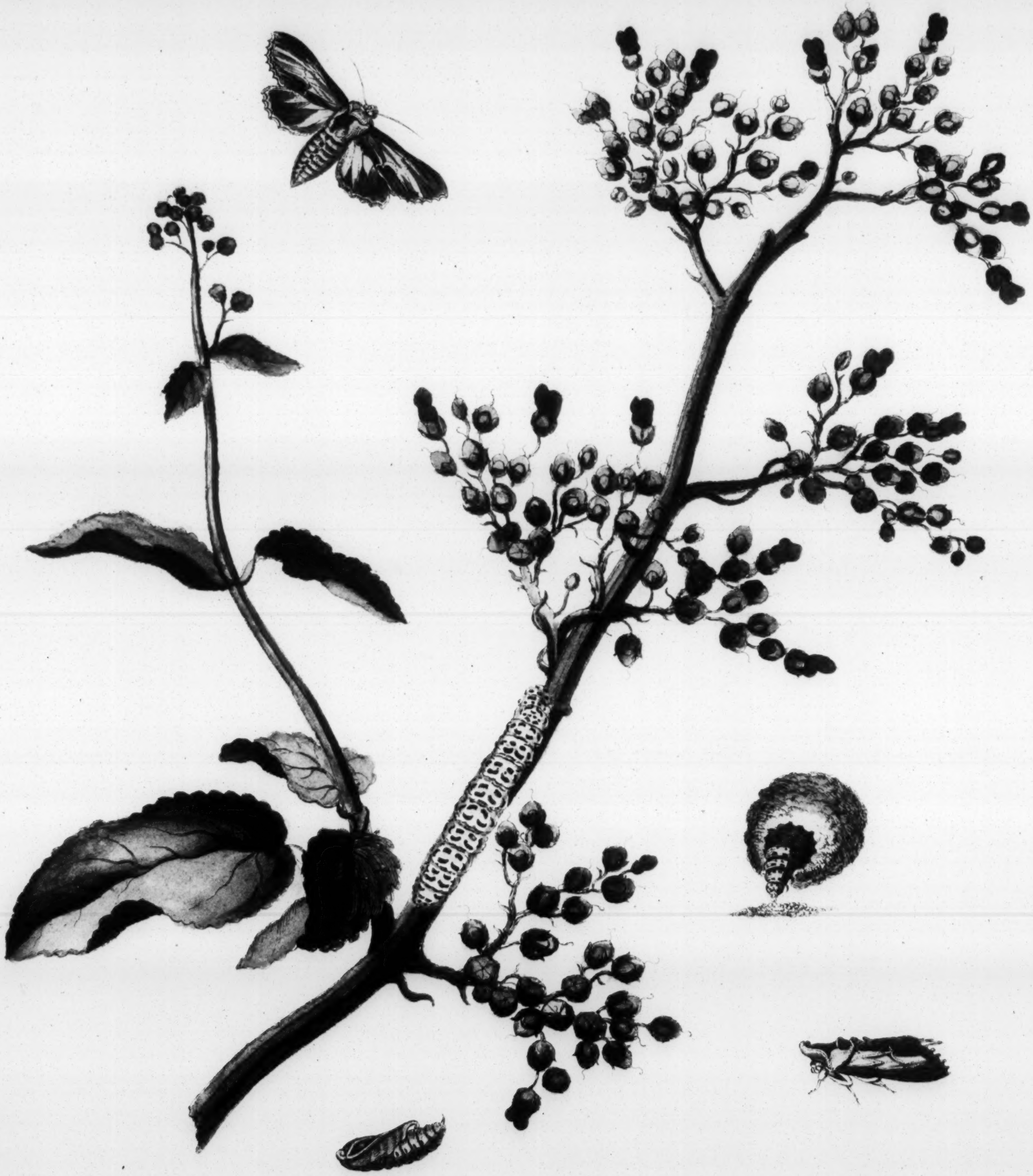

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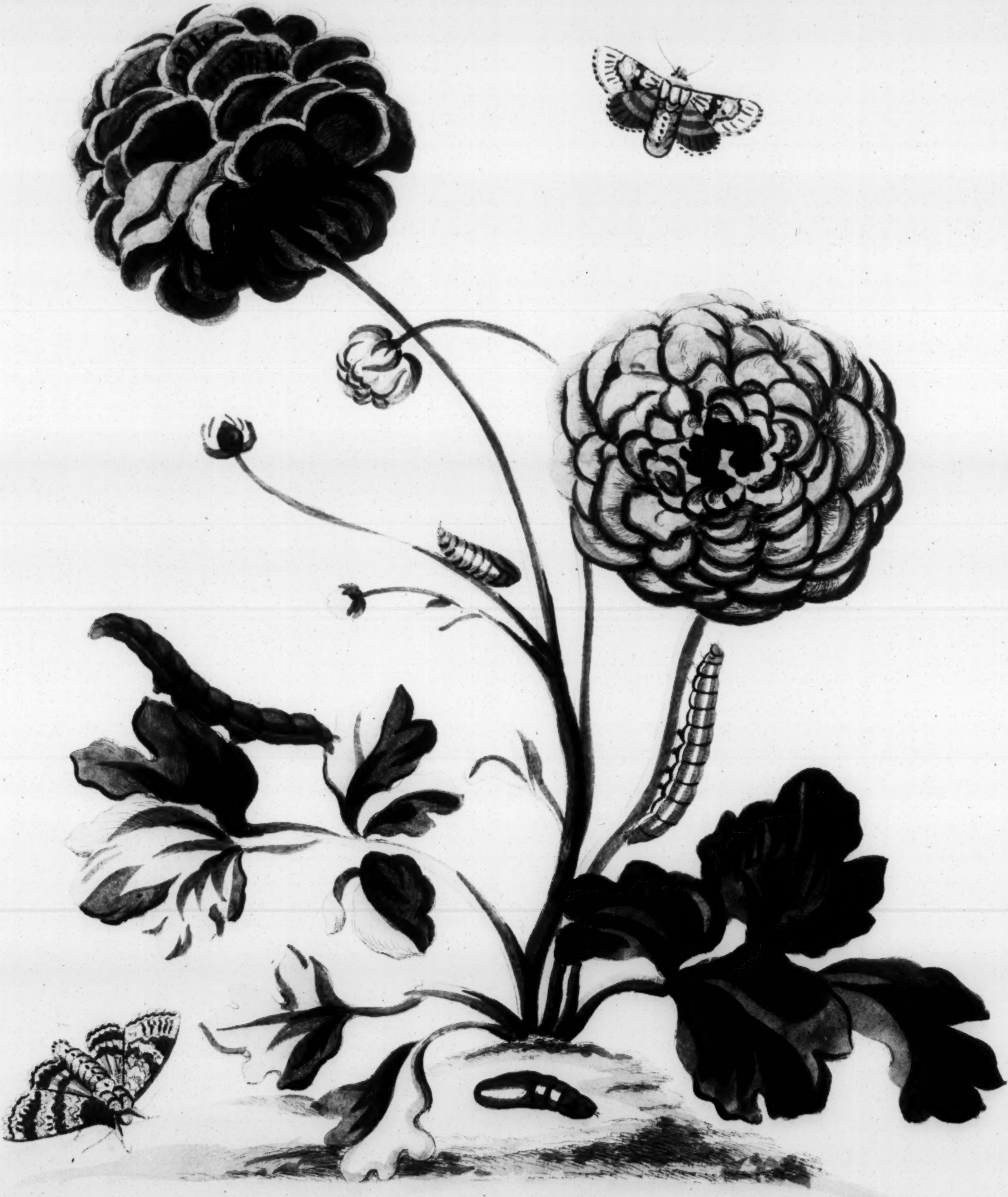


XIV.

THE RANUNCULUS MOTH. The *Caterpillars* repreſented in this Plate were found feeding on the *Ranunculus* Flower about the Middle of *June*, at which Time they were full fed, and ſoon changed to the *Chryſalis* within a Spining or Web; and the *Moths* came out at the Beginning of *September*. The *Caterpillar* and *Moth* are both very rare.

See *Roſel*, Cl. 2. Tab. 53, 54.

The double Orange Ranunculus.

Ranunculus hortenſis, flore aurantio pleno.

XV.

THE WATER-BETONY MOTH. The *Caterpillars* are ſociable, and feed together. They may be found, towards the End of *May*, full fed, on the *Water-Betony*; as alſo on the *Mullein*, which is their proper Food. They go into the Earth about that Time, and change to the *Chryſalis*, within a Caſe compoſed of Earth and a webby Matter, which they ſpin together. The *Moth* appears in *March* following; but it is not commonly taken in its Fly-ſtate.

See *Raii* Hiſt. Inſect. P. 168. N. 25. *Albin*, Pl. 13. *Roſel*, Cl. 2. Tab. 22. *Reaumur*, Pl. 43. P. 602.

The Water-Betony; or Water-Figwort.

Betonica Aquatica, Ger. 579. *Scrophularia Aquatica major*. C. B. Pin. 235.

XVI.

THE SMALL ELEPHANT MOTH. Mr. *Roſel* informs us, That the *Caterpillar* is to be found on the Graſs in Meadows, in the Month of *Auguſt*; but whether that be its favourite Food he does not know. It makes a Spining, and changes to a *Chryſalis* towards the End of that Month. The *Moth* is bred about the End of *May*.

In the Year 1743, on the 28th of *May*, I took ſeveral of theſe *Moths*, in the Evening (after Sun-ſet) as they were hovering about, and feeding on a Flower called *The Batchelors Button*, by the Side of *Oſterly Wood*, near *Brentford*. They are very ſwift in flight, and therefore muſt be taken as ſoon as they approach the Flower. The Females layed their Eggs freely, and, after ſeven Days, the *Caterpillars* were hatch'd, to the Number of about 300. I took the utmoſt Pains to raiſe them; but, for want of their proper Food, they all died. See *Roſel*, Cl. 1. Tab. 5.

The Guelder-Roſe.

Opulus, Flore Globoſo. Tourn. *Inſt.* 607.

L. 1. Ch. 1. XVII. Cl. 1. S. *A.* 17.

THE GOLD-SPOT MOTH. The *Caterpillar*, whence this *Moth* is produced, may be found about the End of *July*, full fed, in the Marſhes about *Rotherhith*, *Vauxhall*, and ſuch like Places. It feeds on the Leaves of the great Water-graſs, *&c.* but the *Caterpillar* is not ſo eaſily found as the Spining which it makes to contain its *Chryſaliſis*: for that ſpining, being of a whitiſh Colour, may be ſeen at a good Diſtance, in Shape and Manner as deſcribed in the Plate. It lies in the *Chryſalis* State about three Weeks, and the *Moth* is bred from the Middle to the End of *Auguſt*; but it is ſeldom taken in the Fly-ſtate.

Purple Flowered Ketmia.

Ketmia, Syrorum, Flore purpureo violaceo. Tourn. *Inſt.*

L. 1. Ch. 1. XVIII. Cl. 1. S. *A.* 18.

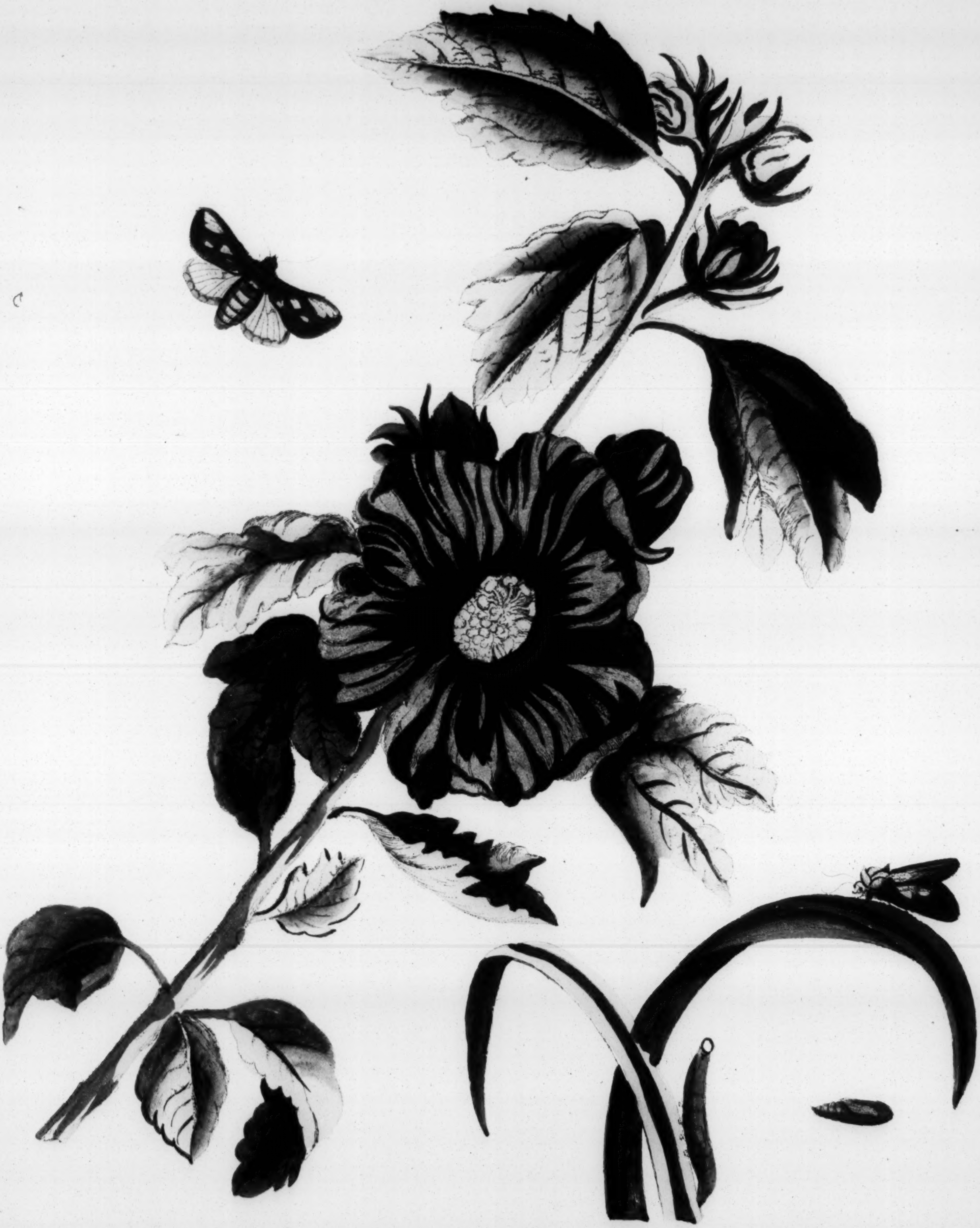
THE SWORD-GRASS MOTH. Mr. *Roſel* informs us, That the *Caterpillar* of this Fly feeds on the *Orache*; that, in *June*, it changed to a *Chryſalis* within the Earth, in which State it remained three Weeks, and then the *Moth* was bred. I once took one of theſe *Caterpillars*, full grown, feeding on the *Sword-graſs* in the Marſhes at *Rotherhith*; but that was in the Month of *Auguſt*, and the *Moth* was bred with me at the End of *September*. Both *Caterpillar* and *Moth* are very ſcarce.

The Perſian Iris.

Xiphium Perſicum, præcox, flore variegato. Tourn.

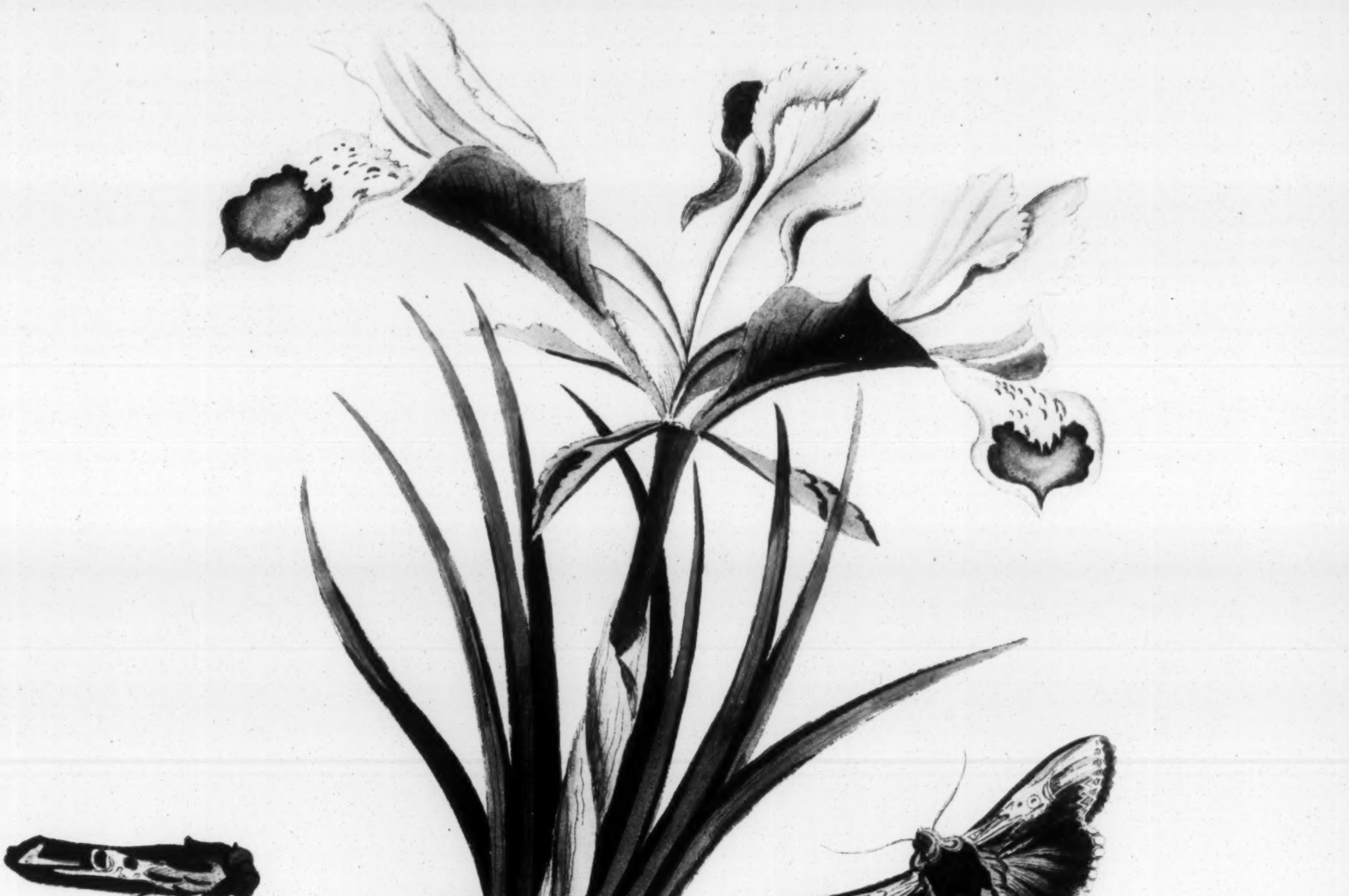
SECT. *B.*

Cl. 1 S. A. 17



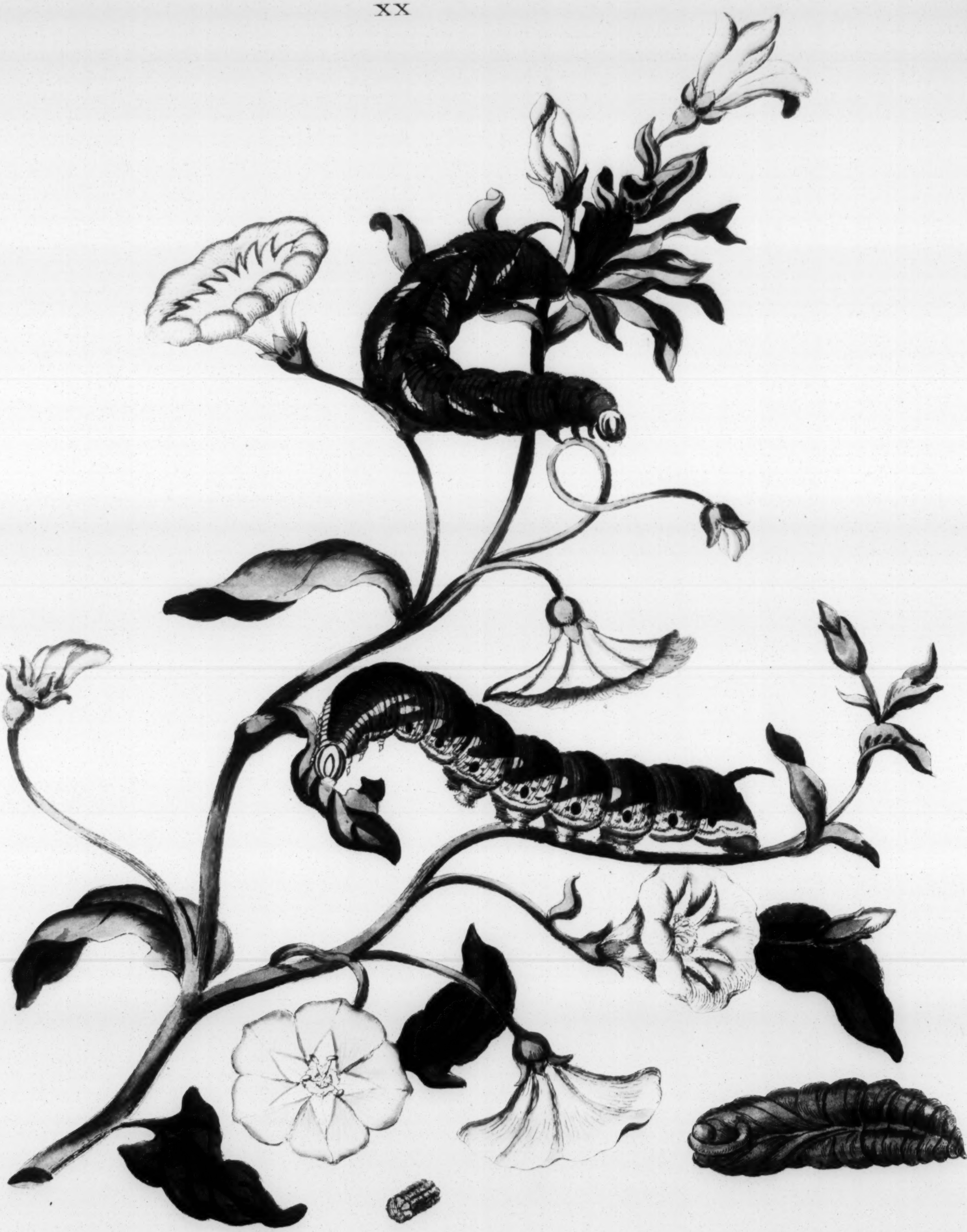
Cl.1.S. 1.18

XVIII



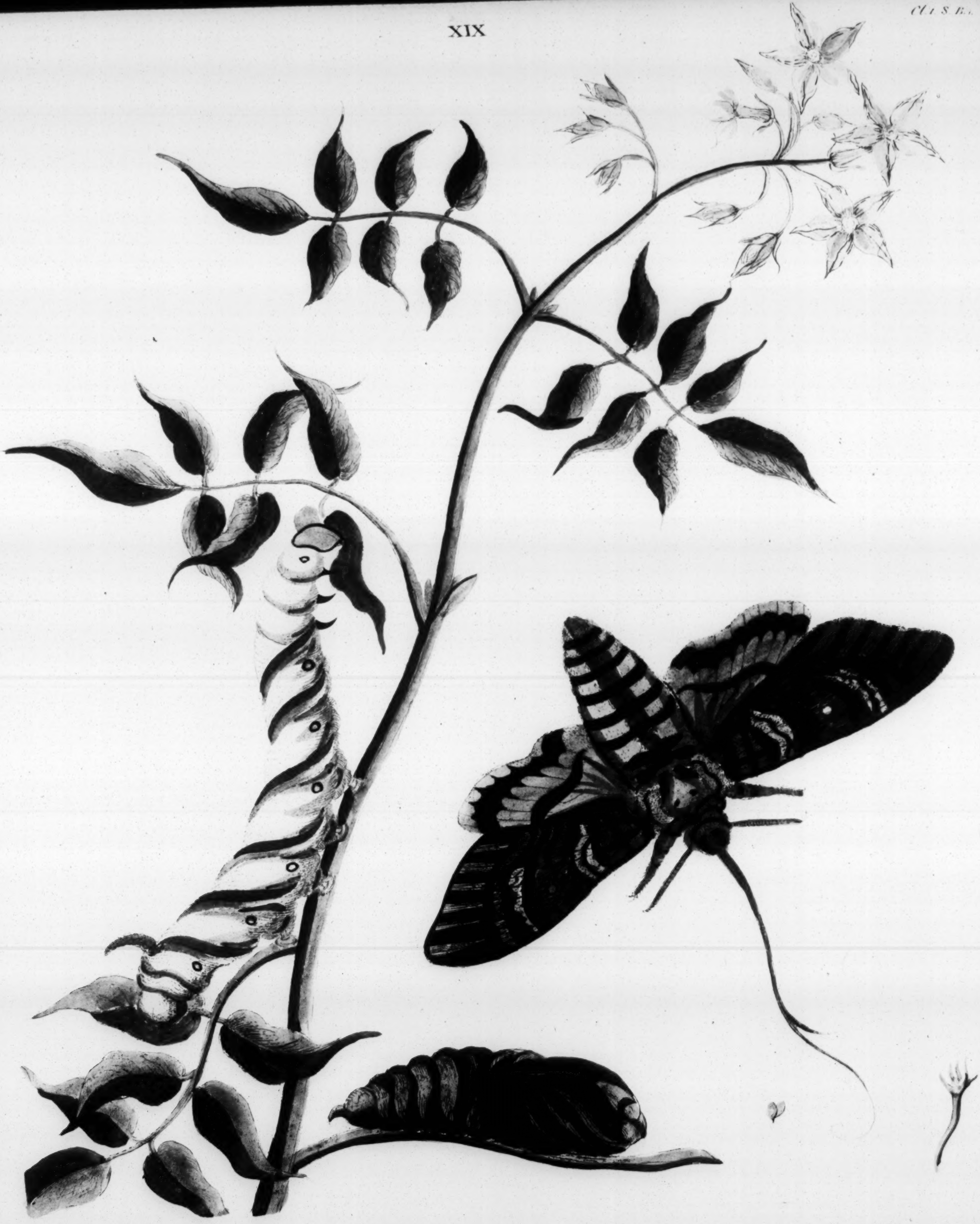
XX

Cl.1.S.B.



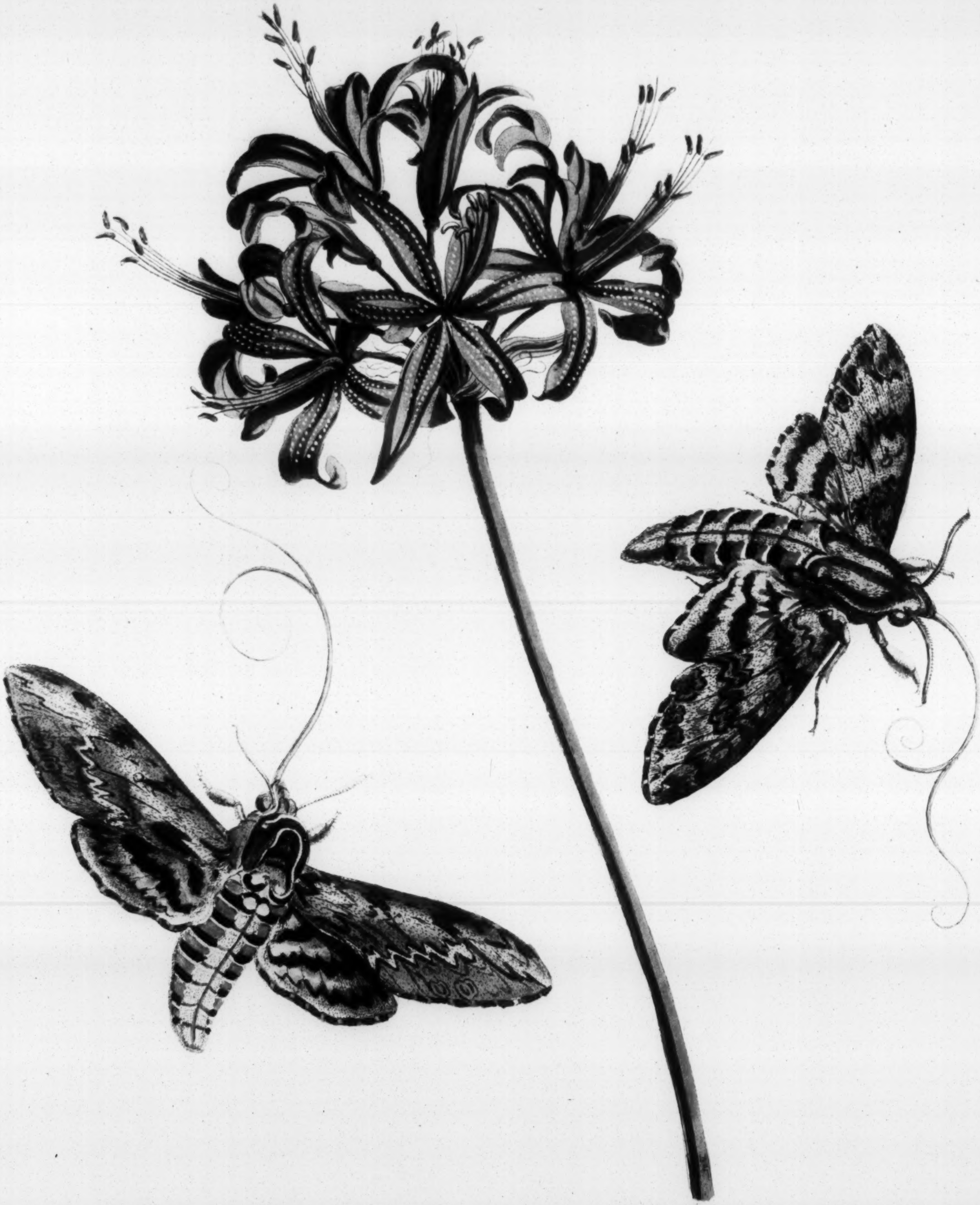
XIX

Cl.1. S. B.1.



Cl. 18 L.

XXI



SECT. *B.*

CATERPILLARS *having* Horns *on their* Tails.

L. 1. Ch. 1. I. Cl. 1. S. *B.* 1.

THE JESSAMINE-HAWK MOTH. This *Moth* was bred in *England* by Mr. *Dandridge*, who took the *Caterpillar*, at *Hampton-Court*, full fed, on the *Jeſſamine*, about the Middle of *July*; at which Time it went into the Ground, and changed to a *Chryſalis*, and the *Moth* came forth at the End of *October*. This Gentleman had alſo five or ſix *Caterpillars*, of the ſame Kind, brought to him, that were taken upon an Elder-tree in *Goodman's Fields*, which likewiſe changed to *Chryſalis* in the Ground in *July*; and the *Moths* were alſo bred in *October*: From whence I conclude that to be the Time when the Fly is uſually bred.

See *Albin*, P. 6. *Reaumur*, Pl. 14. Pag. 342. Vol. 1.

The Jeſſamine in Flower.

Jaſminum vulgatius flore albo. C. B. Pin. 397.

L. 1. Ch. 1. II. Cl. 1. S. *B.* 2.

THE UNICORN, or BINDWEED-HAWK MOTH. Mr. *Roſel* reports this *Caterpillar* to feed in Corn-fields, on the Green-leaves of the Corn. At the End of *July* it was full fed, and went into the Earth in order to change to its *Chryſalis* State; and the *Moth* was bred in *June* following. *Merian*'s Account of this Fly is, That the *Caterpillar* ſeeds on the Roots of the *Leſſer Purple-Bindweed*, which grows amongſt Corn; that it went into the Ground, and changed to a *Chryſalis* at the End of *July*, and that the *Moth* was bred in *September*.

I have not yet had the good Fortune to meet with this *Caterpillar*, but have ſeen ſeveral of the *Moths* that have been bred and taken in *England*. The Dung of this *Caterpillar* is of a very extraordinary Size and Figure; as well as ſome others that are expreſſed in the Plates.

See *Roſel*, Cl. 1. Tab. 7. *Merian*, Chap. 25. *Reaumur*, Pl. 24. Pag. 322. Vol. 2.

The Small Bindweed.

Convolvulus minor vulgaris. Park. 171.

L. 1. Ch. 1. III. Cl. 1. S. *B.* 3.

THE PRIVET-HAWK MOTH. The *Caterpillars* feed on *Privet*, *Lilac*, *Holly*, &c. and are to be found in Nurſeries and Gardens. Look on the Ground under ſuch Trees; and if you diſcover any of their Dung, that will direct you to the *Caterpillars* on the Trees above. They go into the Ground, and change to the *Chryſalis* State in *Auguſt*, and the *Moth* appears in *June* following. 'Tis not very common to take the *Moth* in the Fly-ſtate.

See *Raii* Hiſt. Inſect. P. 144. N. 1. *Mouſet*. P. 91. N. 5. P. 182. Ch. 2. *Albin*, Pl. 7 *Reaumur*, Pl. 20. P. 282. Vol. 2.

The Evergreen-Privet in Flower.

Liguſtrum; foliis majoribus, & magis acuminatis, toto anno folio retinens. Pluk. Alm.

L. 1. Ch. 1. IV. Cl. 1. S. *B.* 4.

THE OLIVE-SHADES, or LIME-HAWK MOTH. This *Caterpillar* is to be got by beating the Boughs of the *Lime* and *Elm* Trees, in the Month of *Auguſt*; at which Time it goes into the Earth, and there changes to a *Chryſalis*, and the *Moth* is bred in *May*. By looking carefully about the Bodies of *Lime* and *Elm* Trees, in *May*, theſe and other *Moths* may be found: For, if the Flies are bred in the Morning, or any Part of the Day, they never offer to fly till Night. You may likewiſe get theſe *Moths*, and many other Sorts, in the *Chryſalis* State, by digging with a Trowel about the Roots of the Trees the *Caterpillars* feed on; and the beſt Time to dig for the Hawk Kind is the Month of *April*. This Fly is ſeldom taken on the Wing.

See *Merian*, Vol. 2. Ch. 24. *Albin*, Pl. 10. *Roſel*, Cl. 1. Tab. 11.

The ſmall leaved Lime-tree in Flower.

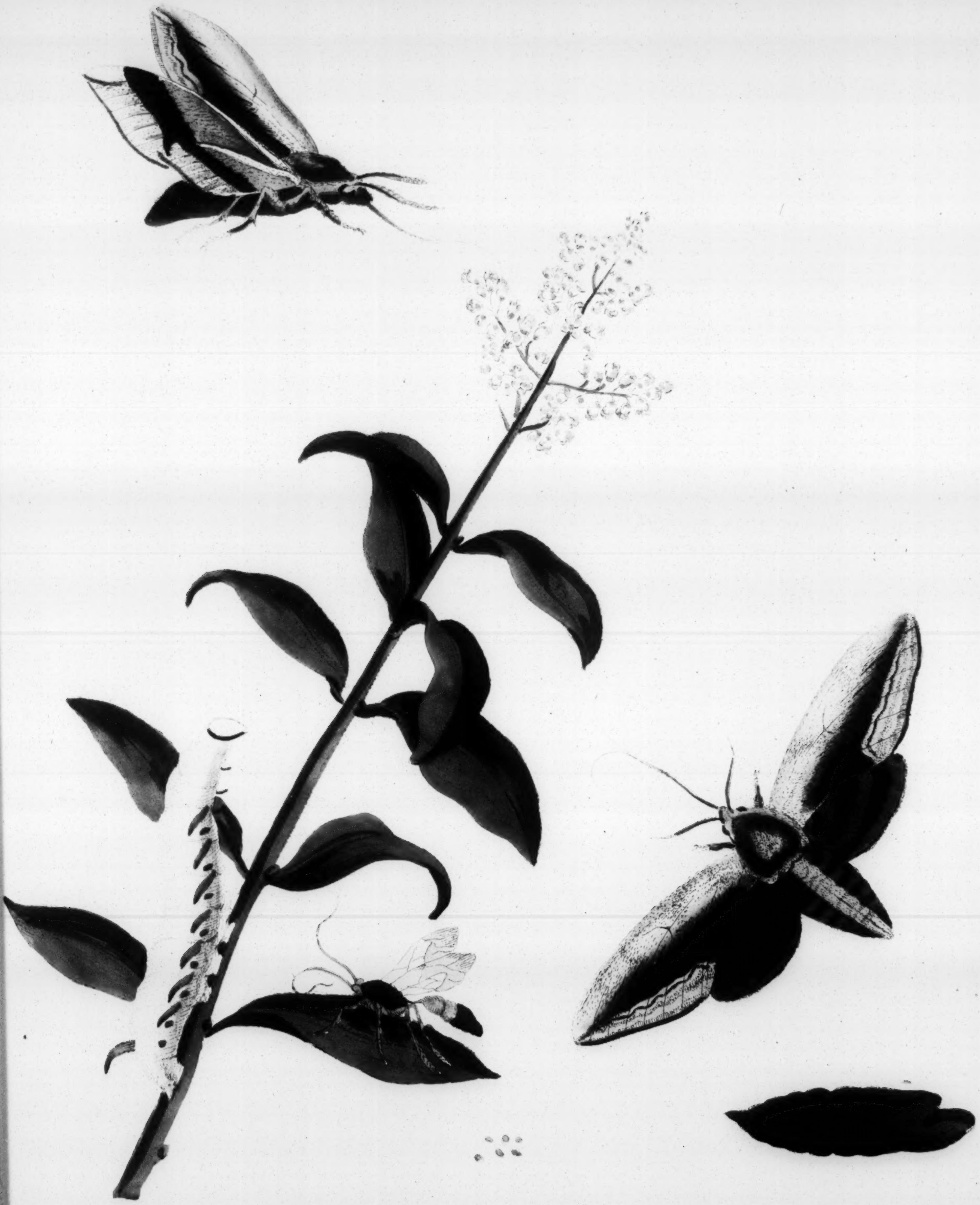
Tilia fœmina, Folio minore. C. B. Pin.

L. 1. Ch. 1. V. Cl. 1. S. *B.* 5.

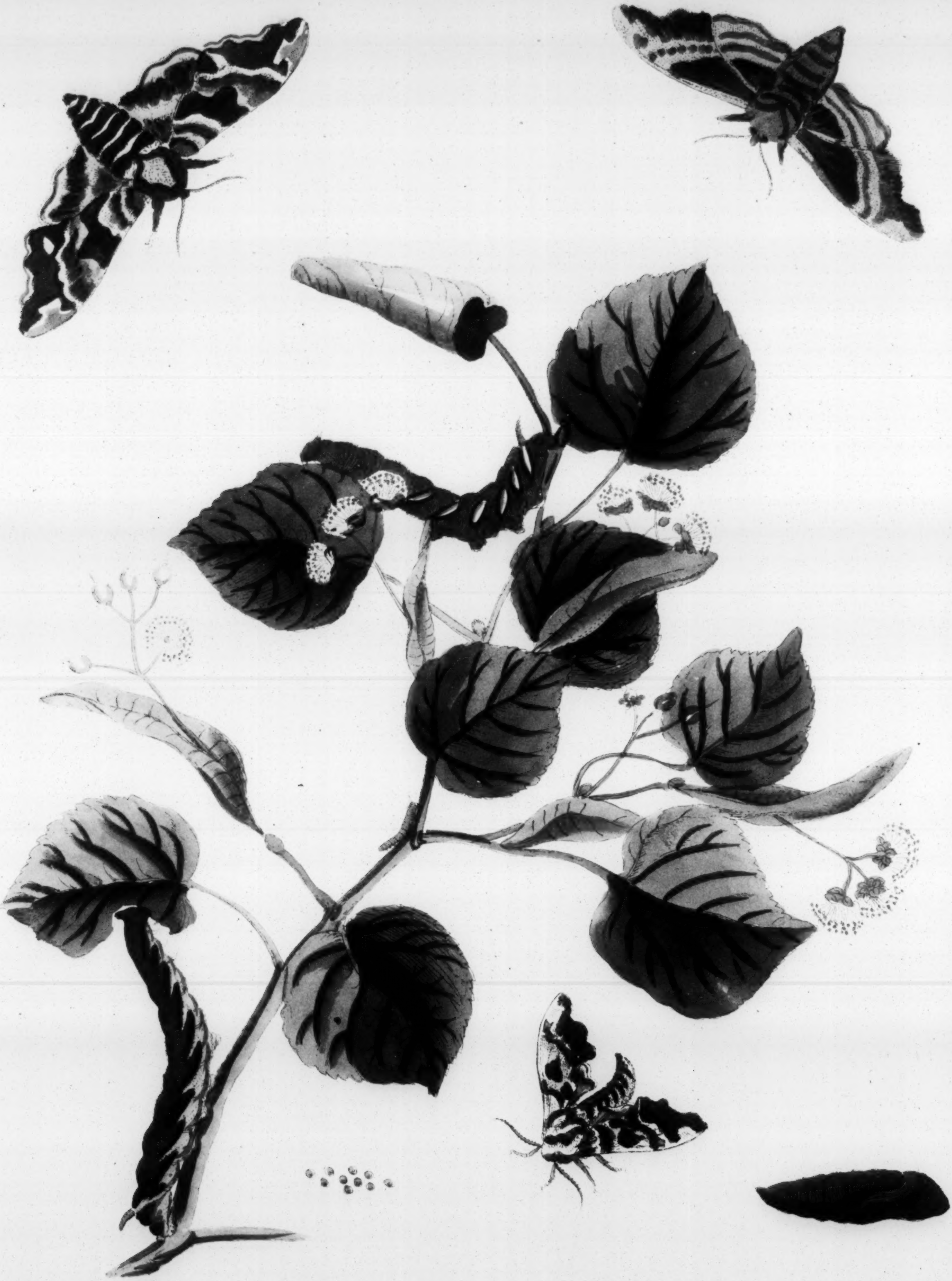
THE EYED WILLOW-HAWK MOTH. The *Caterpillars* are to be found on the Willows that grow about the *Chelſea* Water-works, and in moſt ſuch like Places. At the End of *Auguſt*, I have alſo found them in Gardens feeding on the Leaves of Apple-trees. They put on the *Chryſalis* Form within the Earth in *September*, and the

XXII

Cl. 1. S. B. 3.



Cl. 1. S. B. 4.



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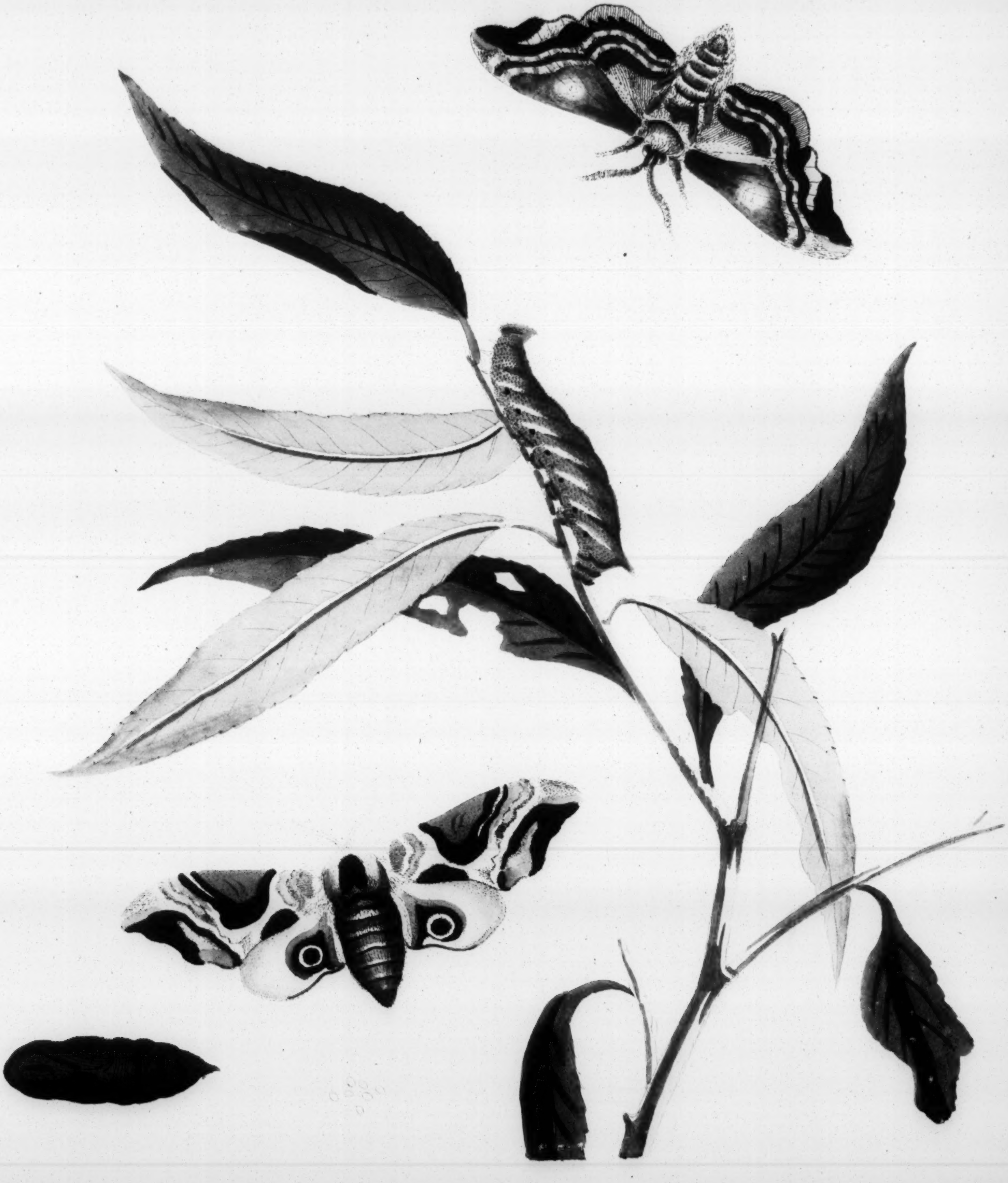

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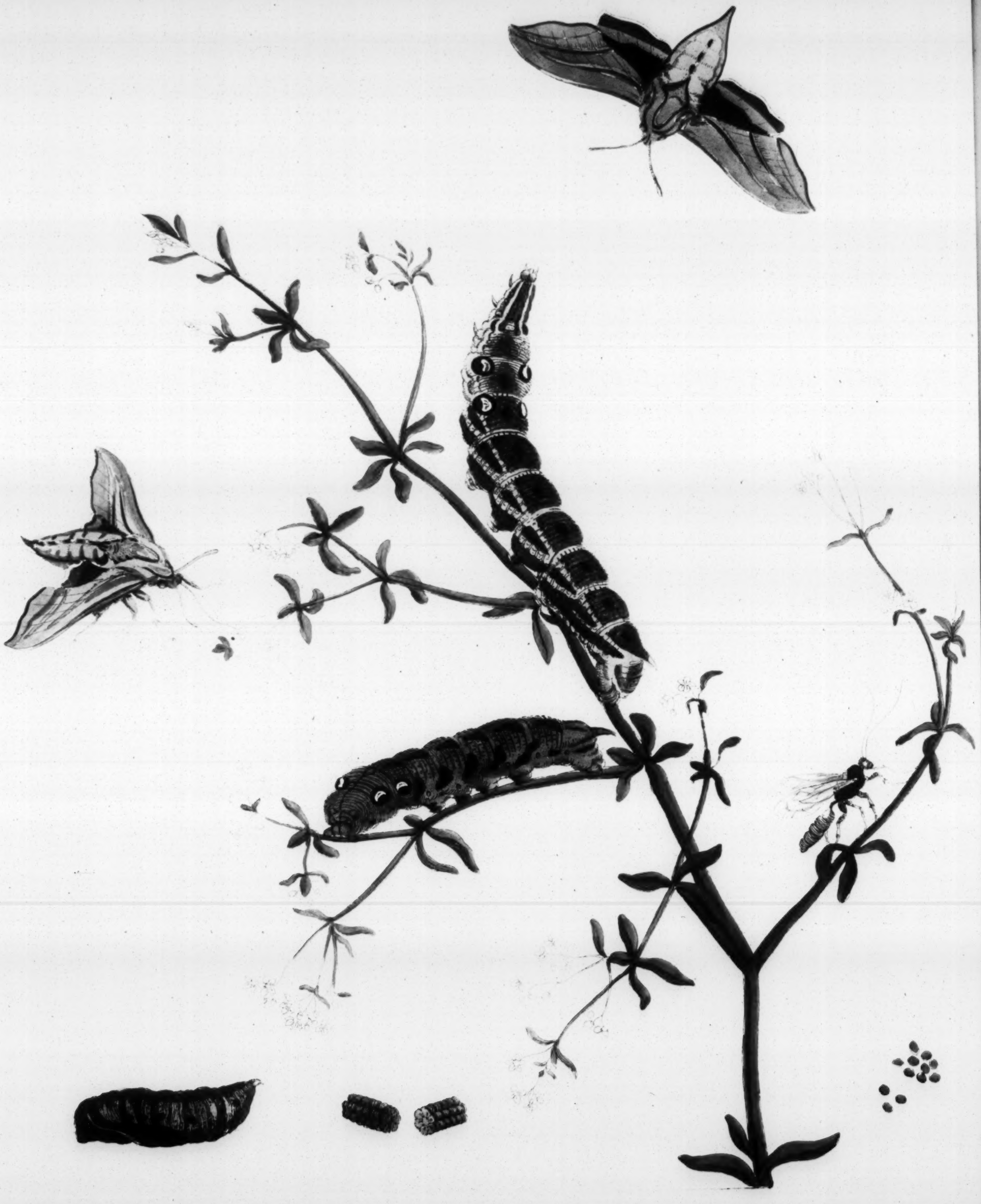
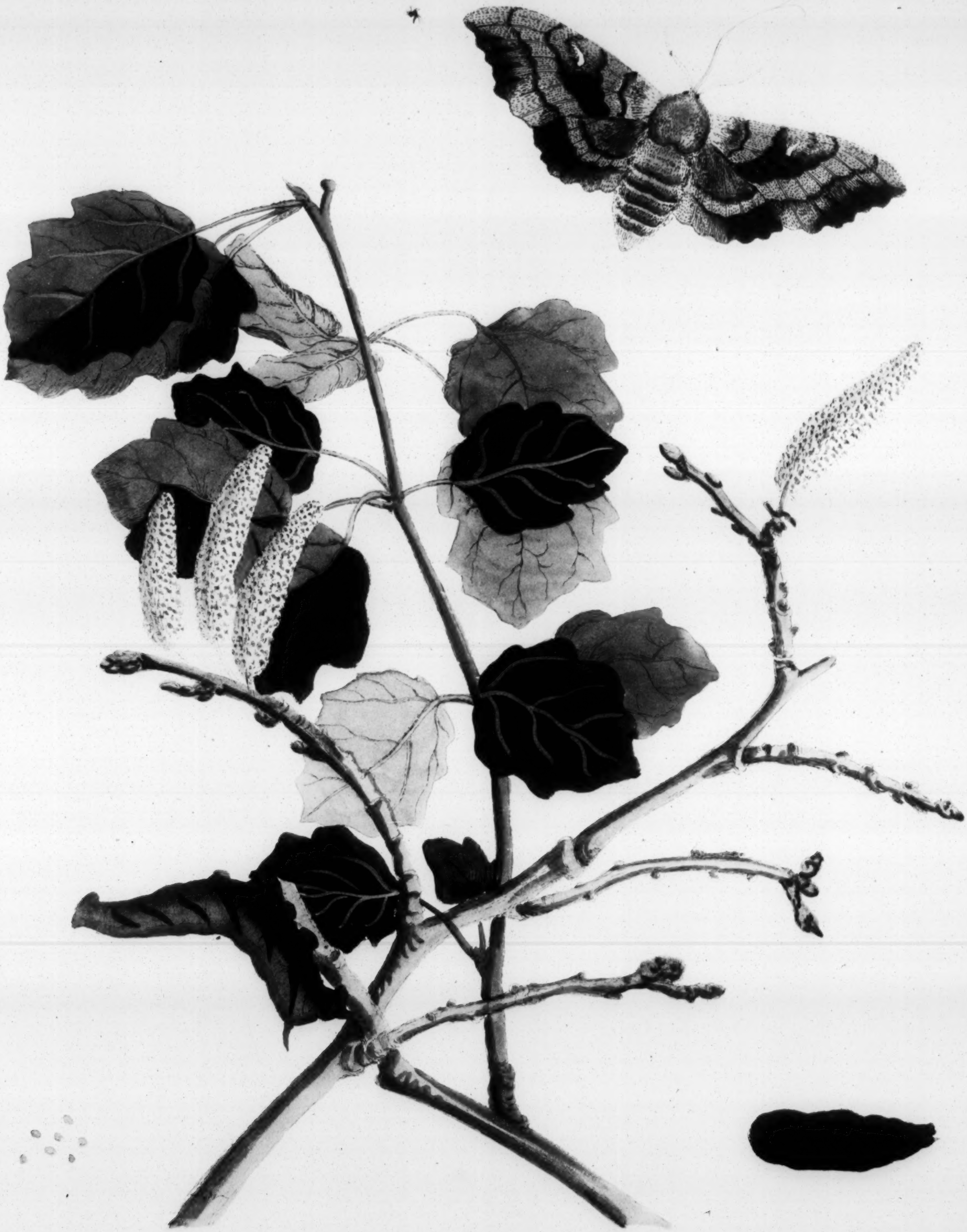


XXV



Moths are produced in *May.* The *Chryſalis* and *Moth* may be got at the ſame Time as directed for the Lime-Hawk.

See *Liſter's Godart.* N. 24. *Merian.* Vol. 2. Ch. 37. *Raii.* P. 148. N. 2. *Mouſet.* P. 91. N. 6. *Albin*, Pl. 8.

The Crack Willow.

Salix, folio longo, latoque, ſplendente, Fragilis. Raii. Syn.

L. 1. Ch. 1. **VI.** Cl. 1. S. *B.* 6.

THE POPLAR HAWK MOTH. The *Caterpillar* of this *Moth* feeds on the Leaves of the *Poplar* Tree, as alſo on the *Willow*; and is to be found at the ſame Times and Places as the *Willow-Hawk Caterpillar.* It becomes a *Chryſalis* in the Ground in *September*, and the *Moth* appears in *May.* It is to be found in the *Chryſalis* and Fly-ſtate as the before mentioned. All the Hawk-tribe fly very ſwiſtly, and I am inclined to believe feed in wet marſhy Places, by reaſon I have never taken them on the Wing in Places where I have always met with Plenty of other Moths.

See *Albin*, Pl. 57.

The Black Poplar-tree.

Populus alba, minoribus foliis. C. B. Pin.

L. 1. Ch. 1. **VII.** Cl. 1. S. *B.* 7.

THE LADIES BEDSTRAW, or ELEPHANT-MOTH. The *Caterpillars* are to be found in the Ditches in *Rotherhith* Marſhes, and alſo by the *New River* Side, near *Hornſey.* They feed on the *White Ladies Bedſtraw*, and are full grown at the End of *July*; at which Time they uſually go into the *Chryſalis* State, by making a light Spining amongſt their Food, where they remain till the End of the following *May*: At which Time the *Moth* is bred; but very ſeldom taken in the Fly-ſtate. Mr. *Albin* has mentioned ſomething very remarkable of this *Caterpillar*, *viz.* its Dexterity in Swimming: For, feeding commonly in or near the Water, if at any time it happens to fall in, it turns itſelf on its Back, and ſwims, with its Head and Tail turned together, till it gets hold on ſome Part of the Plant, by which it helps itſelf up again. It lies in the Egg-ſtate about nine Days.

See R*aii* Hiſt. Inſect. P. 145. N. 2. *Albin*, Pl. 9.

The White Ladies Bedſtraw.

Gallium Album. Ger. 967.

S E C T. *C.*

SECT. *C.*

CATERPILLARS *having* one Protuberance *on the* Rump, *with* indented Markings.

L. 1. Ch. 1 | I. | Cl. 1. S. *C.* 1.

EALING's GLORY, a MOTH. Its *Caterpillar* feeds on *Black Thorn*, *White Thorn*, *Crab-tree*, &c. becomes a *Chryſalis* in the Earth in *May*, and the *Moth* appears in *September*. *Charles Lockyer*, Eſq; has bred great Numbers of this *Moth* at his Houſe at *Ealing*; but I have heard of no body elſe who has met with them in any Plenty.

See *Albin*, Pl. 14. *Roſel*, Cl. 11. Tab. 33.

The Black Thorn.

Prunus Sylveſtris.

SECT. *D.*

CATERPILLARS *having* two *or more* Protuberances.

L. 1. Ch. 1. | I. | Cl. 1. S. *D.* 1.

THE OZIER, or PEBBLE MOTH. Mr. *Dandridge* found the *Caterpillar* feeding on the *Dutch Willow*, in the Marſhes near *Rotherhith*, about the Middle of *July*; it changed to a *Chryſalis* within the Leaves ſpun together; and at the Beginning of *Auguſt* came forth the *Moth*. This fly is very ſcarce.

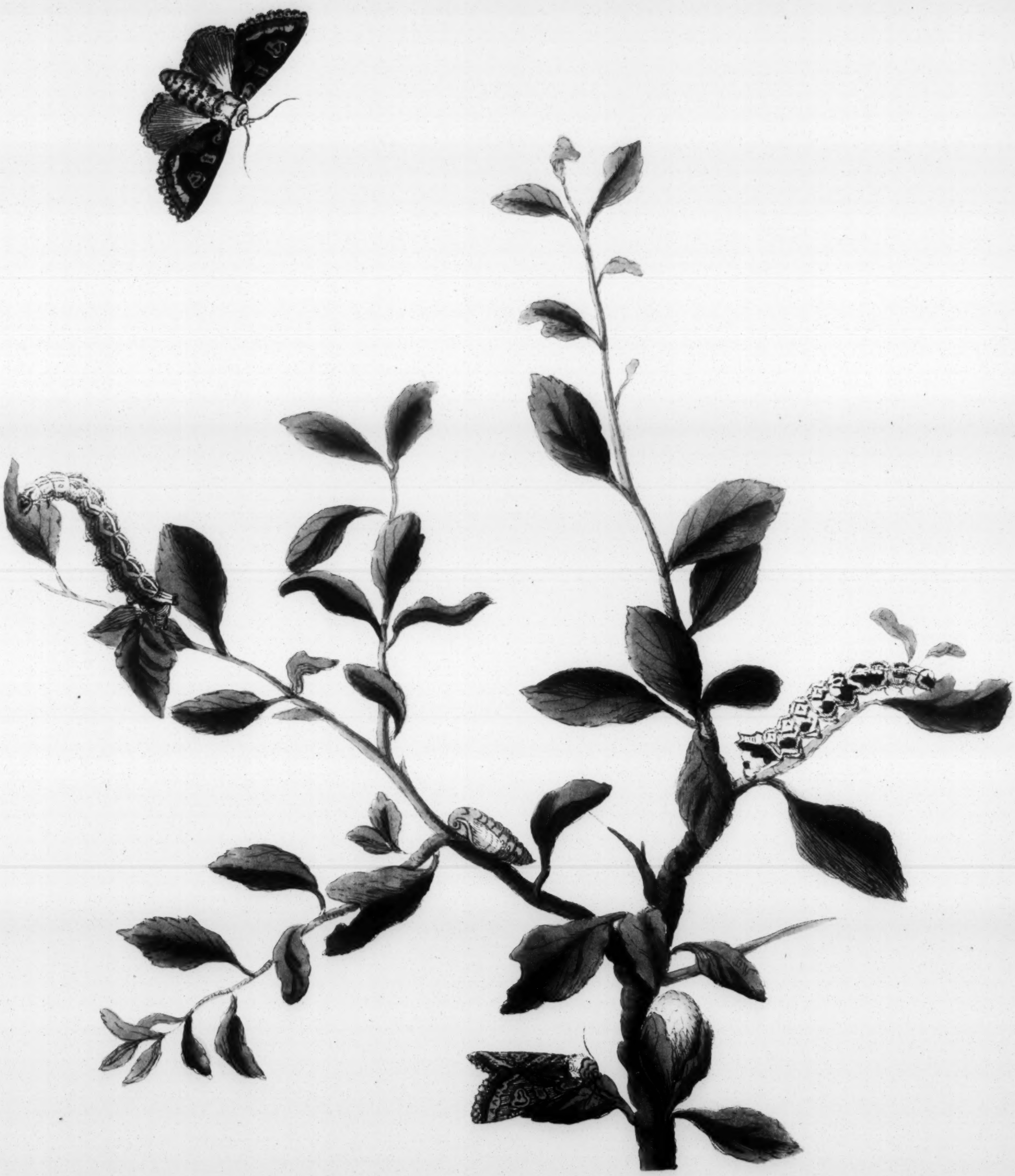
See *Albin*, Pl. 14. *Liſter's Godart*. N. 21. *Roſel*, Cl. 11. Tab. 20. *Reaumur*, Pl. 22. P. 282. Vol. 2.

The Ozier.

Salix, vulgaris, alba, arboreſcens. C. B. Pin.

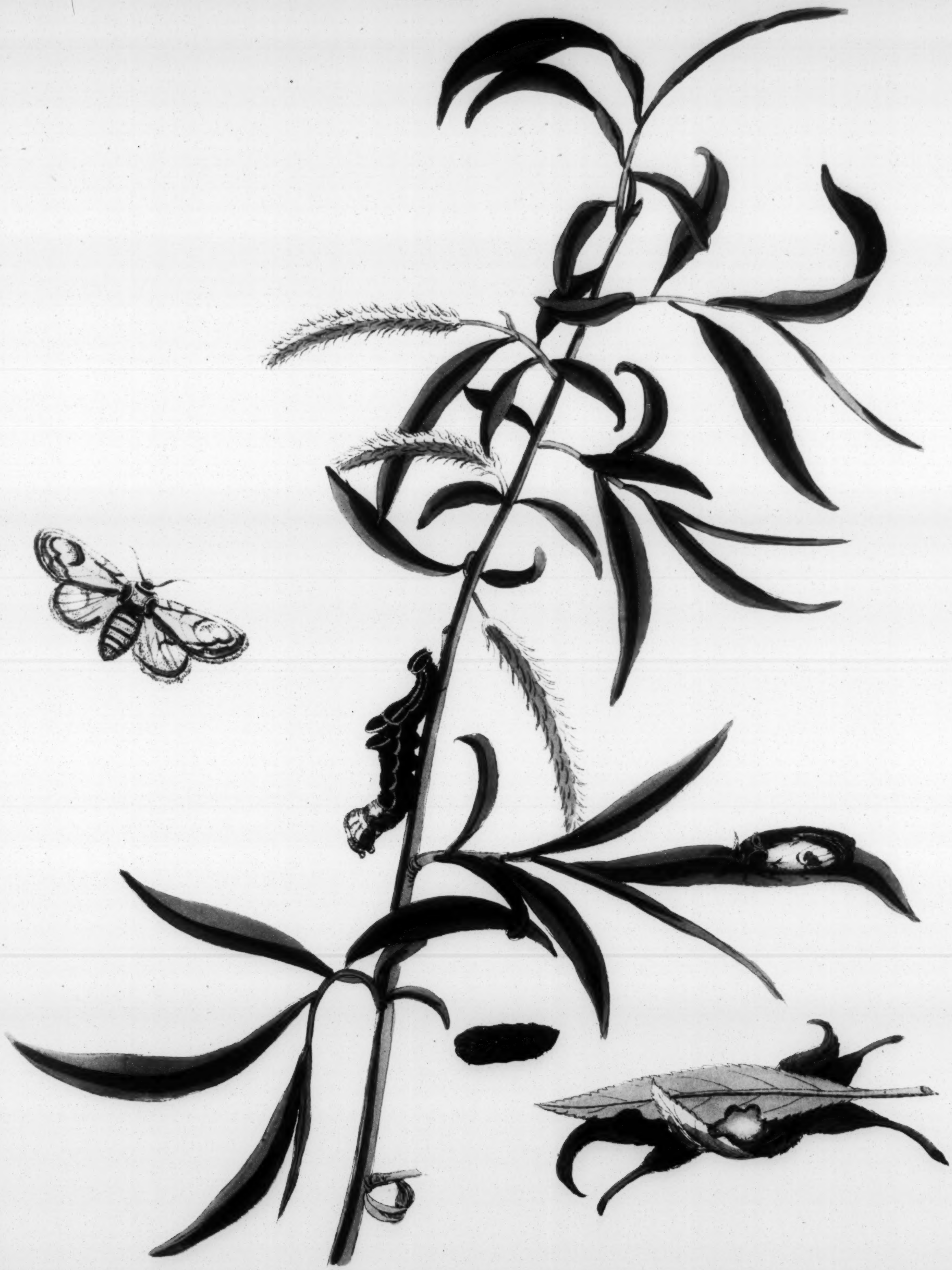
XXVII

Cl. I. S. C. I.



XXVIII

Cl. 1. S. II. 1



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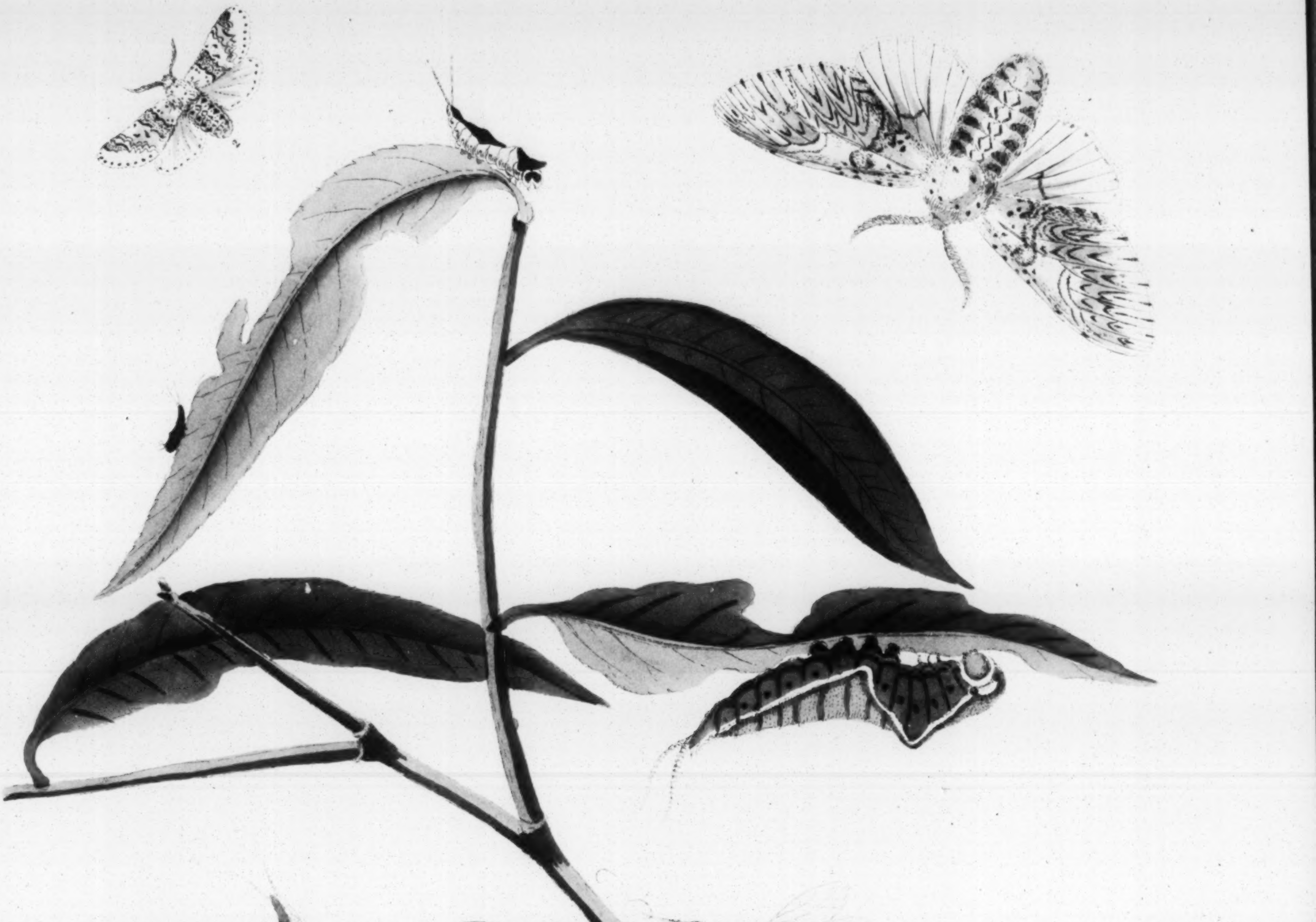


SECT. *E.*

CATERPILLARS *whoſe* Shoulders *riſe into an* angular Figure, *having no* Holders *behind.*

L. 1. CH. 1. **I.** CL. 1. S. *E.* 1.

THE PUSS-MOTH. Though the *Caterpillar* of this Fly ſeems moſt fond of the *Willow*, it is often found on the *Abele*, or *Poplar* Tree. It has a Power of ſtretching out, and putting back its Head, at Pleaſure; which it ſeems to do as it thinks itſelf more or leſs in Danger. It is armed with two Tubes at the End of the Tail, and two others within thoſe, of a Blood red Colour, which it nimbly, if touched by any Thing, darts out: The Uſe of theſe is (as I apprehend) to prevent the *Ichneumon* Flies from ſettling on them; but, notwithſtanding thoſe Flies are often able to remain long enough to leave their Eggs behind: In ſuch Caſe, the *Moth* is not produced, but, inſtead thereof, the *Ichnemon* pictured in the Plate. Such *Caterpillars* as the *Ichneumons* have not fixed their Eggs on, uſually go into the *Chryſalis* State at the Beginning of *Auguſt*, on the Body of the Tree, and generally near the Ground, the *Caterpillar* gnawing the Wood into a Kind of Saw-duſt; which, mixing with a glutenous Matter, or Cement, that comes from its Mouth, makes a hard Caſe, in which the *Chryſalis* is formed, on the outſide of the Tree; the *Moth* appears the *May* following. Theſe *Moths* are ſeldom taken in the Fly-ſtate; but may eaſily be obtained by breeding the *Caterpillars*, which may be found at the ſame Time, and in the ſame Places, where you take thoſe that produce the *Willow* and *Poplar Hawks*.

Figure 2. in the ſame Plate, repreſents a *Moth* called the KITTEN. The *Caterpillar* feeds on *Black Thorn*, *Willow*, *&c.* becomes a *Chryſalis* at the Beginning of *Auguſt*, and the *Moth* is bred in *May*. The *Caterpillar* and Fly are rarely to be met with.

See *Liſter's Godart.* N. 20. *Mouſet.* P. 183. *Raii* Hiſt. Inſect. P. 153. *Albin*, Pl. 11. *Roſel*, Cl. 11. Tab. 19. *Reaumur*, Pl. 21. Pag. 282. Vol. 2.

The Willow.

Salix.

III.

THE WILD ROSE-MOTH. The *Caterpillar* feeds on the *Sweet Briar* ſometimes, but moſt commonly on the *Oak*; changes to a *Chryſalis* (within the Leaves of ſuch Trees faſtened together by a Spining) at the End of *September*, and the *Moth* is bred in the Middle of *May*. The Caterpillar and Fly are both ſcarce.

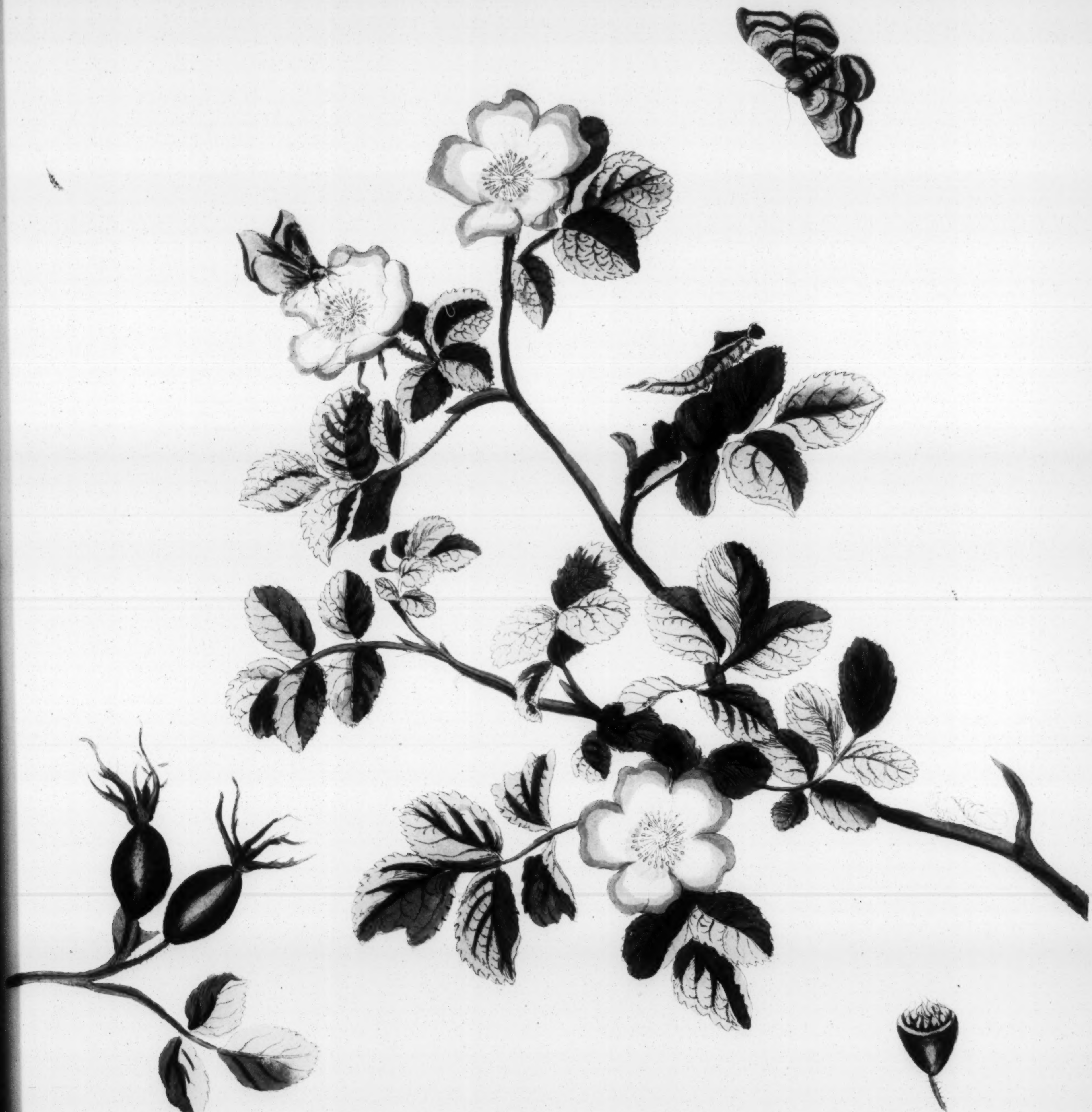
See *Albin*, P. 65. *Reaumur*, Pl. 22. Pag. 282. Vol. 2.

The Wild Roſe, or Sweet Briar.

Roſa ſylveſtris; *foliis odoratis.* C. B. Pin.

Class II.

XXX



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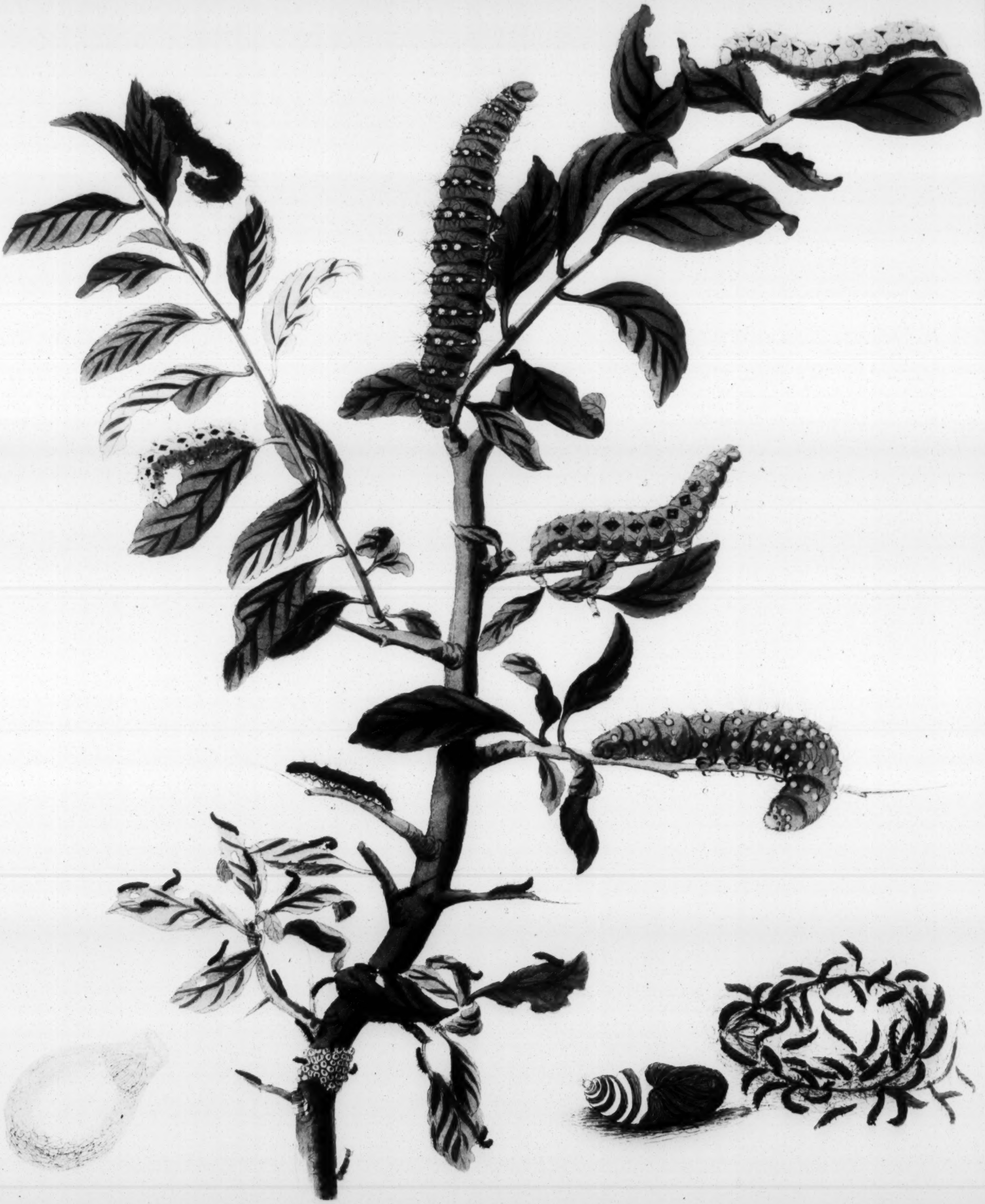
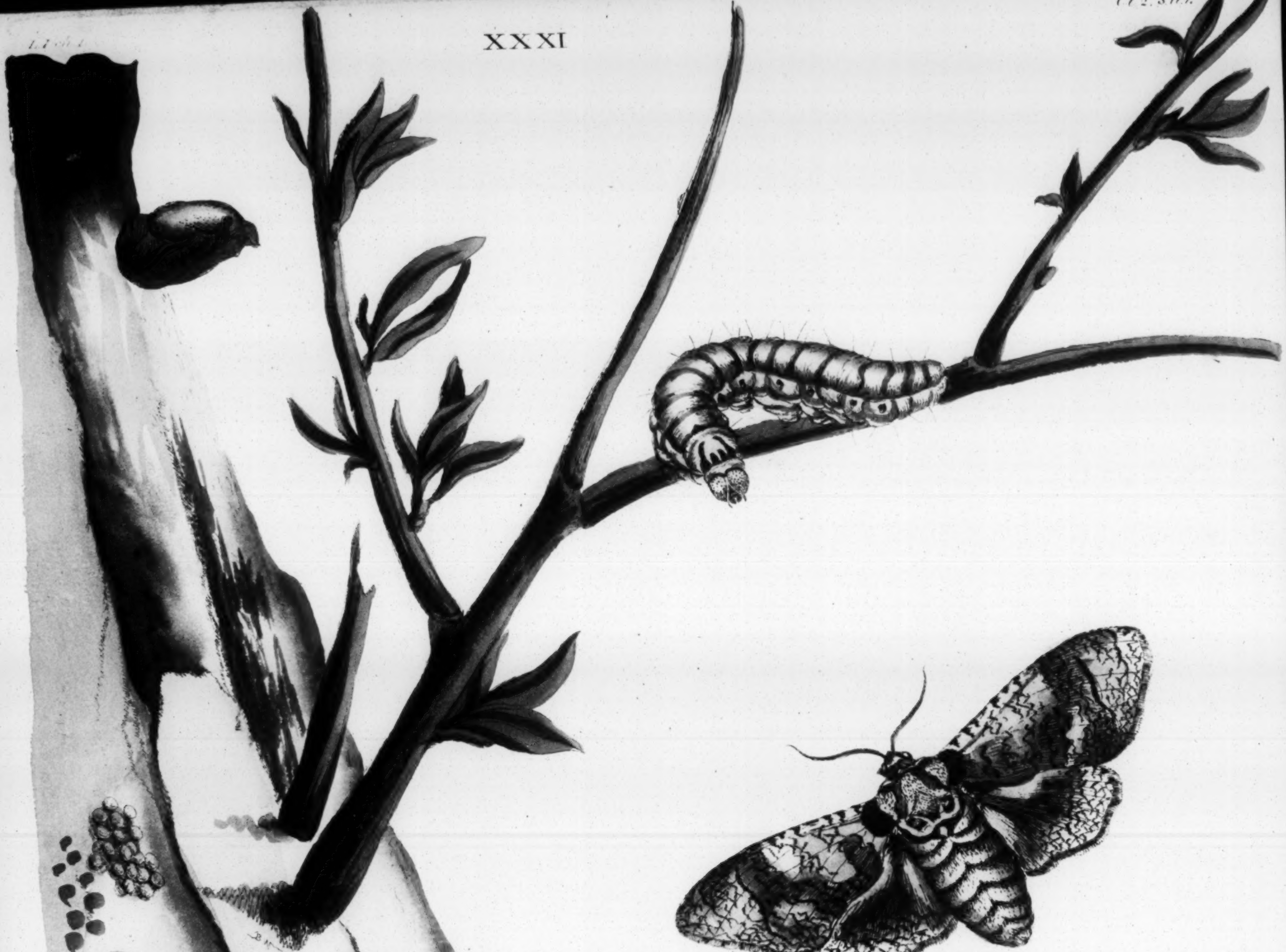


I. Fol. 1

XXXI

Cl. 2. Sal. 1.



CLASS II.

CATERPILLARS *having little* HAIR.

SECT. *a.*

Without Protuberances.

L. 1. CH. 1. I. CL. 2. S. *a.* 1

THE GOAT-MOTH. The moſt likely Means of obtaining the *Caterpillars* is, to ſeparate the Bark of ſome old *Willow* from the Body of the Tree by a Chiſſel. Thus probably you may diſcover ſome of them : Put them into an earthen Jar, and feed them with *Willow* Wood, which Food they ſeem moſt fond of; but cover the Jar leaſt they creep away. Do not keep them in a Box, or any Thing made of Wood, leaſt they eat their Way through it and be loſt. Theſe *Caterpillars* are full fed about the Middle of *May*, at which Time they gnaw the Wood into a Kind of Saw-duſt, which, being mixed with a glutenous Matter from their Mouths, makes a Caſe wherein they change to the *Chryſalis*. They lye in that State for about ſix Weeks; after which the *Moths* appear, and may be found on the Bodies of *Willow* Trees. This *Chryſalis*, by the Help of ſtrong, ſhort Saw like Teeth round Part of each Joint, and pointing towards the Tail, is enabled to force its Fore Part through the Body of the Tree, (as is expreſſed in the Plate), near which you'll find the *Moth*, if you chance to look that Day it is bred. They are reported to be three Years proceeding from the Egg to the Fly; but this I have not myſelf experienced.

See *Liſter* on *Godart*. P. 49. N. 39. *Albin*, Pl. 35. *Roſel*, Cl. 2. Tab. 18. *Reaumur*, Pl. 17. Pag. 342. Vol. 1.

The Willow-tree.

Salix.

L. 1. CH. 1. II. CL. 2. S. *a.* 2.

THE EMPEROR-MOTH. The beſt Way to be furniſhed with this fine *Moth* is, to breed it from the *Caterpillar*, which may be found in its infant State during the Month of *May*; but it is moſt adviſeable to ſeek for them before the 20th. The *Caterpillars*

terpillars, when newly hatch'd, are ſociable, and keep together for about three Weeks, aſter which Time they ſeparate and are difficult to be found. The moſt certain Food to take them on is the *Black Thorn*, and of that ſuch as is not of above two or three Years Growth. They are uſually found on Twigs about one or two Feet from the Ground, and (as I have obſerved) herd in Cluſters together, when they are in their firſt, ſecond and third Skins.—On the 12th of *May* 1745, I had about ſixty *Caterpillars* hatched from ſuch Sort of Eggs as are expreſſed round the *Black Thorn* in the Plate: On the 19th they appeared in their ſecond Skin; on the 25th, in their third; on the 18th of *June*, in their fourth, and, on the 22d, in their fiſth The *Caterpillars* grew ſo much in this Skin in four Days, that they were three Times as big as when full ſed in their fourth Skin. On *June* the 30th, they ſhifted into their ſixth and laſt Skin; in which Skin (as well as in the former Skins) ſuch as appear moſt Green are the female *Caterpillars*. On the 12th of *July* ſome of them began to ſpin Caſes, in order for their Change into the *Chryſalis* State; and, on the 26th, the whole threeſcore had ſpun themſelves up. Thus they remained throughout the Winter, and, from the 16th to the 30th of *April* following, I had forty of the *Moths* bred; but the Reſt of the *Aurelias* did not produce their *Moths* till the Year following: So that about twenty of my Number were in the *Chryſalis* State near two Years; and yet produced *Moths* at laſt that were equally beautiful and large. The Female lays from 250 to 300 Eggs, in ſuch Manner as is repreſented in the Plate, and theſe ſhe hides in three or four different Places for the more certain Security of ſome of them.

The Caſe which contains the *Chryſalis* is well worthy Notice, being compoſed of a glutenous Matter fit to reſiſt all Kinds of Weather; and, for its greater Security, that Part which I call the Mouth is doubly guarded: So that, if any Inſect ſhould chance to force the firſt Fence, it will there meet with a ſecond Reſiſtance, and that of ſo ſtrong a Nature, from its particular make, that I am apt to believe few, if any, can ever enter; and thus the *Chryſalis* is preſerved in the moſt ſecure and wonderful Manner, as will be better underſtood by attending to the Figure repreſented in the Plate. The *Moth* is very ſeldom taken in the Fly State.

The Black Thorn.

Prunus Sylveſtris. Ger.

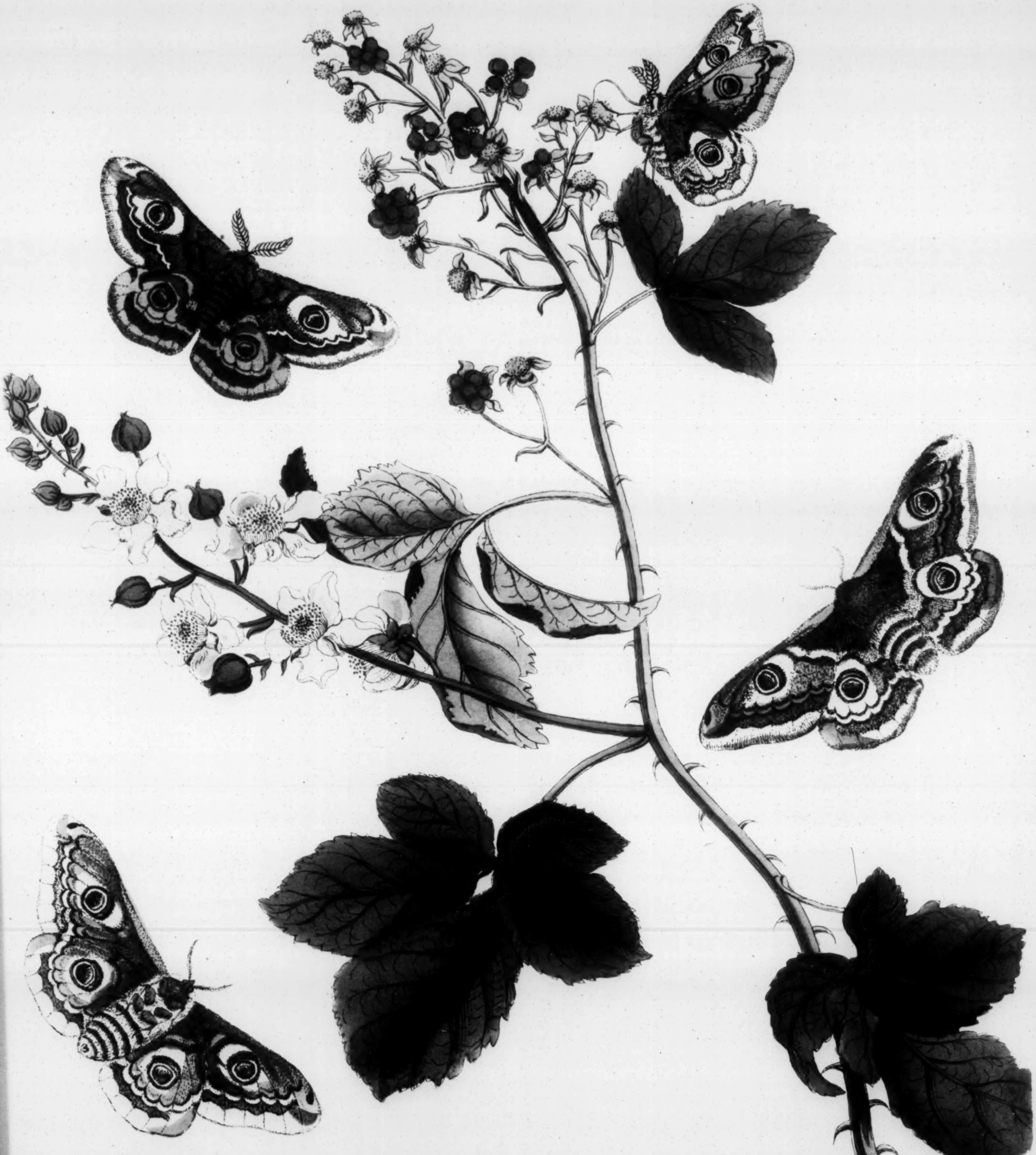
L. 1. Ch. 1. III. Cl. 2. S. *a*. 3.

THIS Plate repreſents the *Male* and *Female* of the EMPEROR-MOTH, of which I have already given an Account.

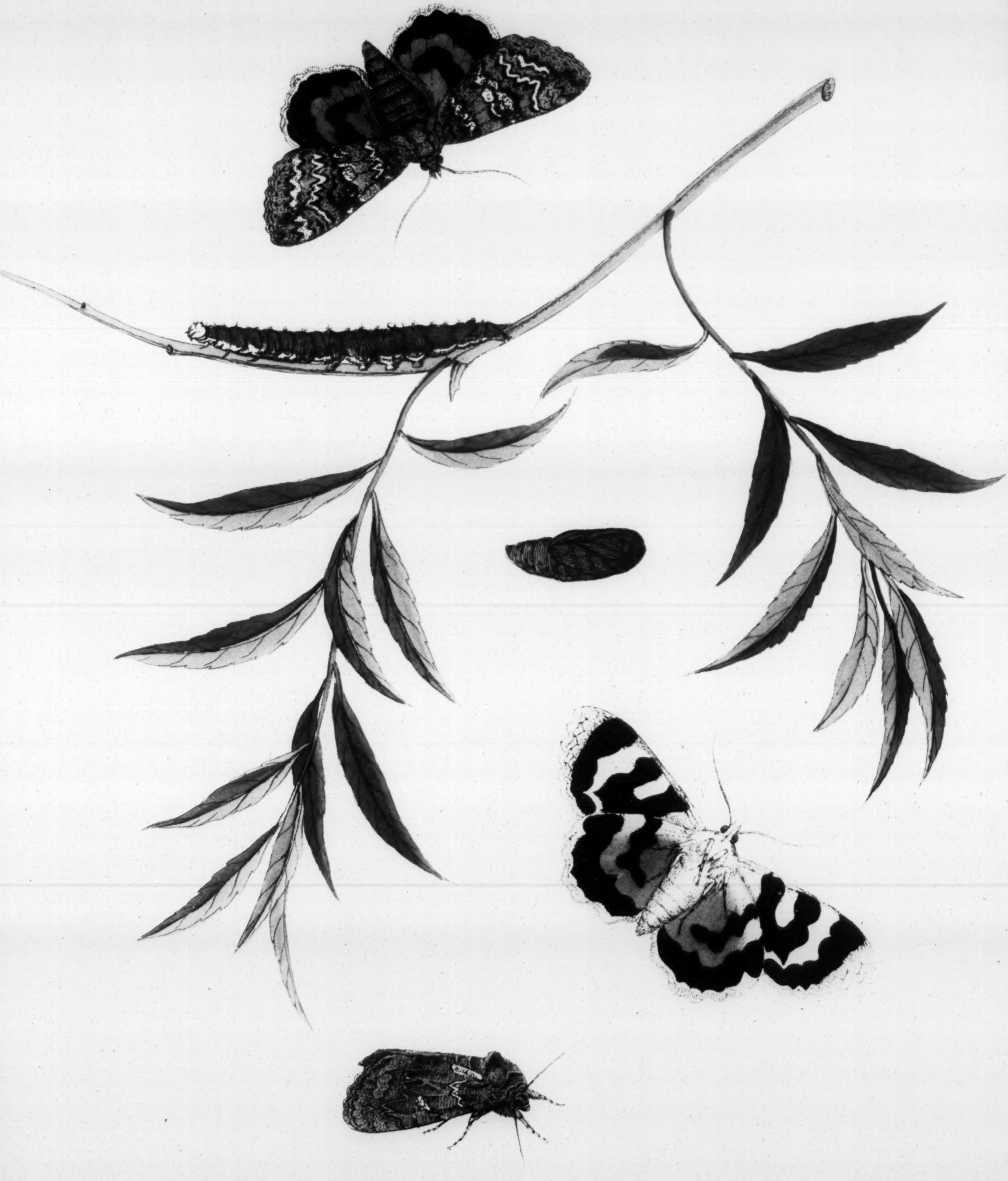
See *Merian*, Vol. 1. Ch. 23. *Albin*, Pl. 25. *Roſel*, Cl. 2. Tab. 4, 5. *Reaumur*, Pl. 49 and 50. Pag. 554. Vol. 1.

The White Fruit-bramble.

Rubus vulgaris major, fructu albo. Raii. Syn.



XXXV



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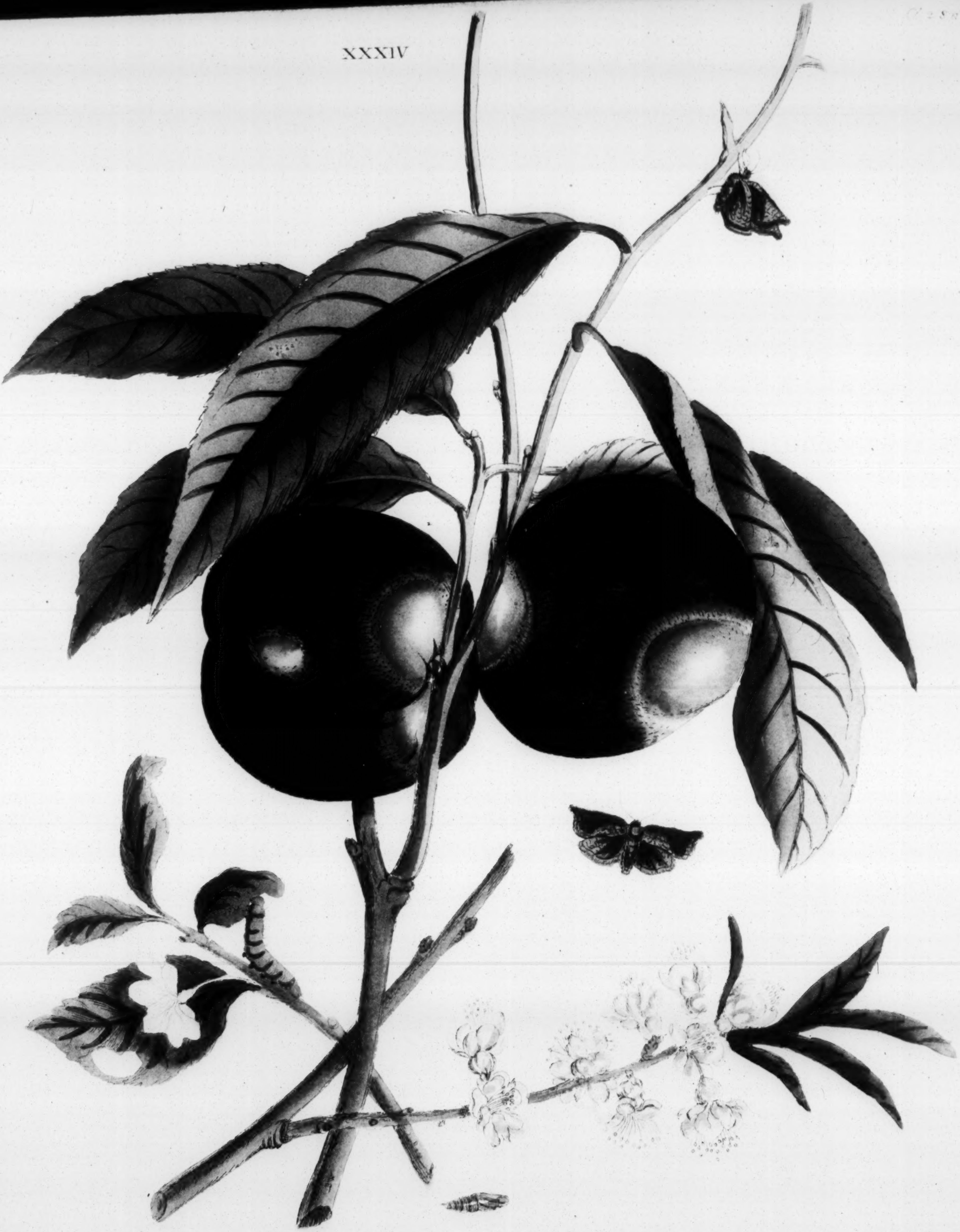
XXXIV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L. I. Ch. I. IV. Cl. 2. S. *a*. 4.

THE PLUMB-TREE MOTH. The *Caterpillar* feeds in Gardens on various Fruit-trees: It changes to a *Chryſalis* about the End of *May*, within Leaves ſpun together, and lies in that State till the Middle of *June*, when the *Moth* appears.

See *Albin*, Pl. 36.

The red Roman Nectarine.

Nuciperſica Romana rubra.

Sect. *b*.

Caterpillars, hairy, *with* Protuberances.

L. I. Ch. I I. Cl. 2. S. *b*. I.

THE WILLOW RED-UNDERWING MOTH. The *Caterpillar* feeds on *Willow*; changes to a *Chryſalis*, betwixt the Bark and Body of the *Willow* Tree, about the Middle of *June*. The *Moth* is bred in the Middle of *July*, and may be found at that Time on the Barks of *Willows*, and other Trees, as alſo againſt Walls, Houſes, Barns, &c. If the Weather proves very hot, the *Moth* will fly in the Day-time. The *Caterpillar* is rarely ſound.

See *Albin*, P. 80. *Roſel*, Cl. 2. Tab. 15.

The weeping Willow.

Salix orientalis, flagellis deorſum pulchre pendentibus. Tourn. Cor.

Class III.

CLASS III.

CATERPILLARS *having much* HAIR.

SECT. *A.*

Without Protuberances.

L. 1. CH. 1. **I.** CL. 3. S. *A.* 1.

THE GREAT TYGER MOTH. The *Caterpillars* are hatch'd from the Egg in *Auguſt*, and ſeed in their infant State on *Nettles*, *Lettice*, &c. till the End of *October*; when, if the Weather be cold and bad, they find themſelves a Reſidence for the Winter in Holes and private Receſſes, where they continue till the *March* or *April* following, as the Spring is more or leſs forward. At their coming out of their Holes they ſeed on the young *Nettles*, *Chickweed*, &c. that grows in dry Ditches and Gardens; and, when they are in their laſt Skin, which is uſually at the End of *May*, they may eaſily be found in the Places already mentioned. At the Beginning of *June* they ſpin a Bag, and within that change to the *Chryſalis*, in which State they lye for one Month, after which the *Moths* come abroad and are very common. I have obſerved, that moſt of the *hairy Caterpillars* live throughout the Winter, after the Manner above mentioned.

See *Liſter*'s *Godart*. N. 99. *Mouſet*. 15. P. 93. *Raii* Hiſt. Inſect. P. 151. N. 3 and P. 152. N. 7. *Merian*, Vol. 1. Ch. 5. *Albin*. Pl. 20. *Roſel*, Cl. 2. Tab. 1. *Reaumur*, P. 534. Vol. 1.

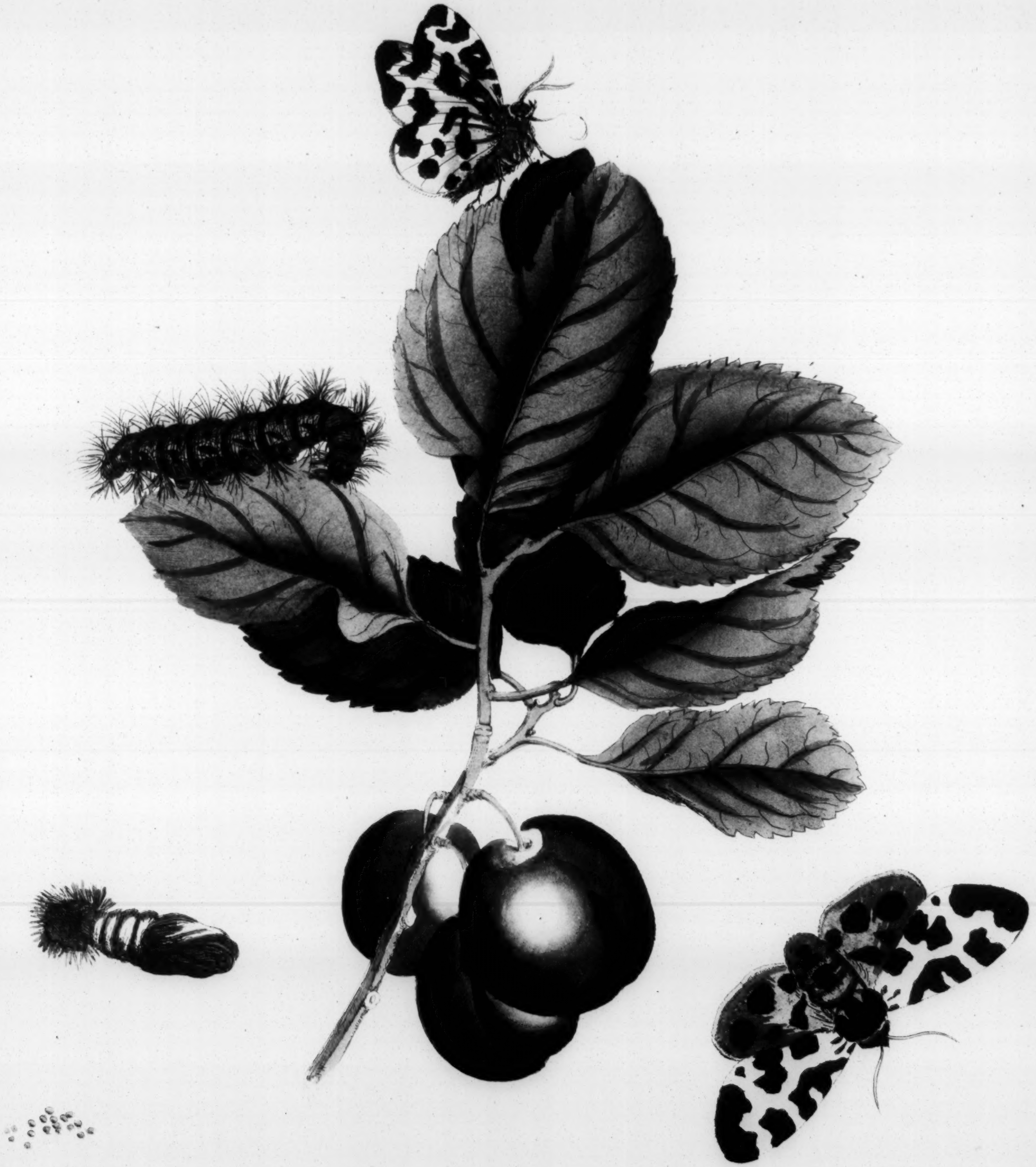
The Hatfield Plumb.

Prunus, fructu magno craſſo ſubacido. Tourn.

L. 1. CH. 1. **II.** CL. 3. S. *E.* 1.

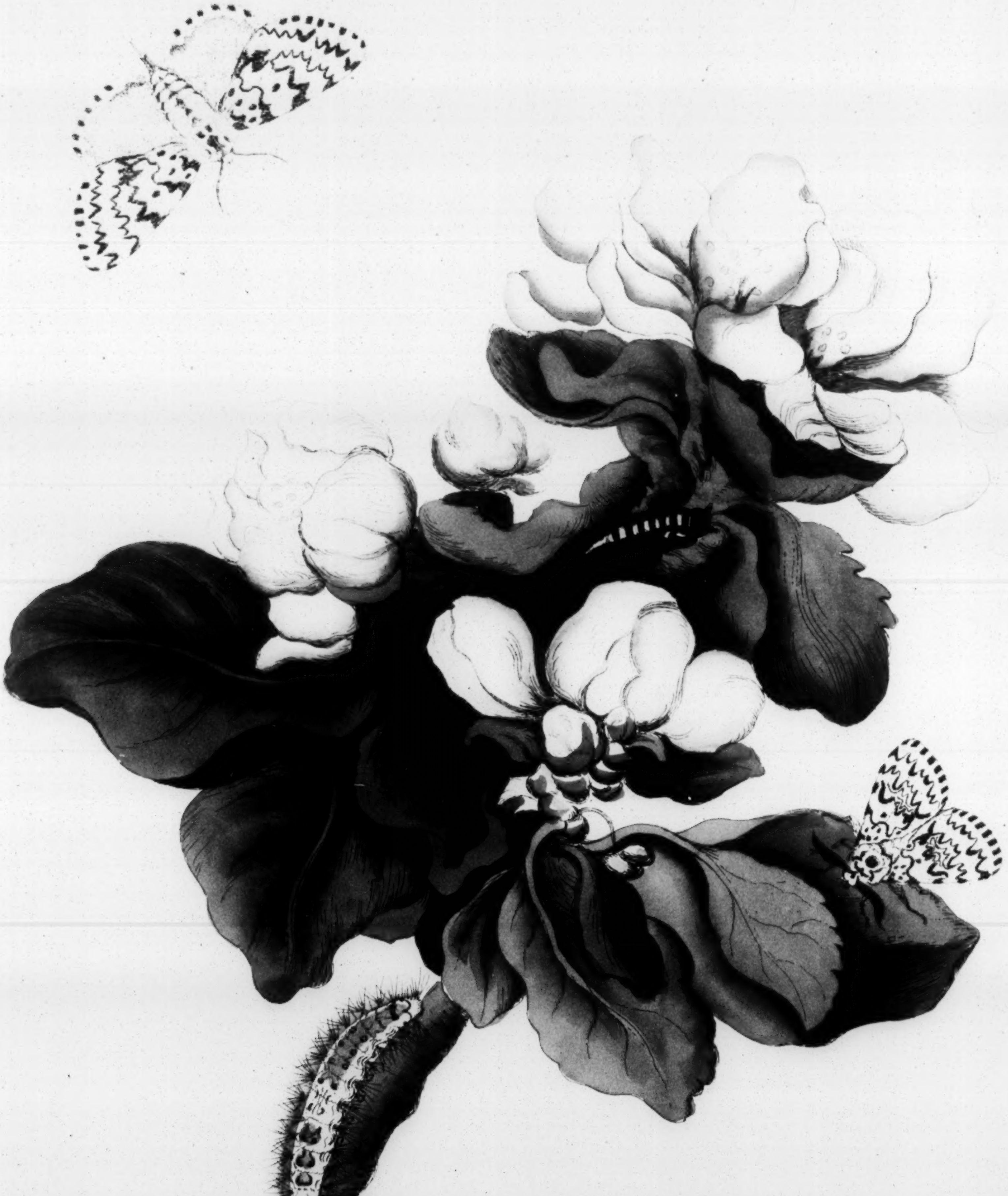
THE CREAM-SPOT TYGER MOTH. *Chickweed*, *Nettles*, *Lettice*, &c. are the Food of this *Caterpillar*, which is to be found on ſuch Growths in dry Ditches, in Woods, &c. at the End of *April*. It lives all Winter as the laſt mentioned, and

XXXVI

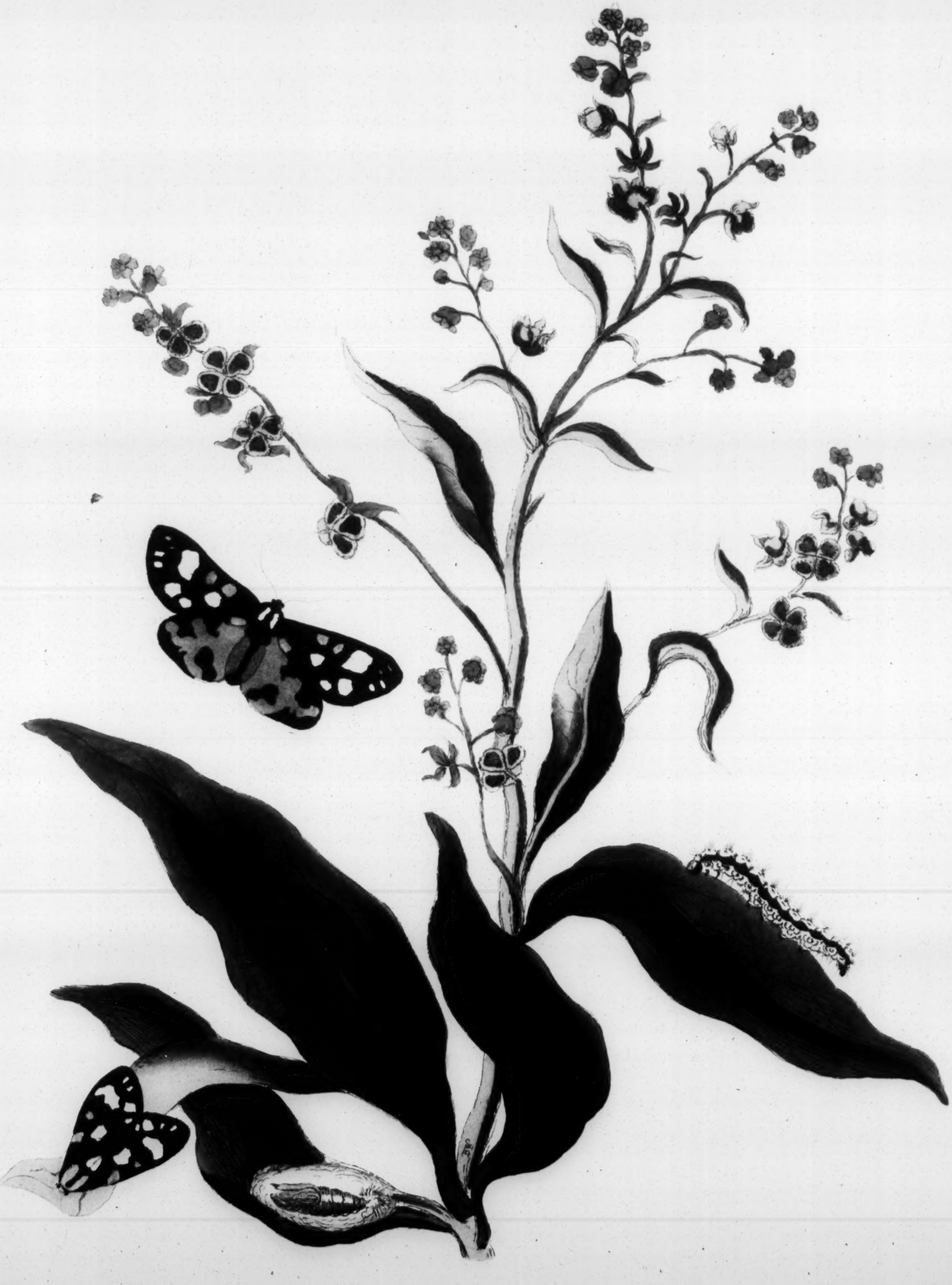


Cl.3 S.1.2

XXXVII



XXXVIII



changes to a *Chryſalis*, within a Spinning, at the Beginning of *May*. The *Moth* is bred about three Weeks after; flies in the Day-time, and is very common.

See *Merian*, Vol. 1. Ch. 6. *Albin*, Pl. 21. *Reaumur*, Pl. 31. Pag. 534. Vol. 1.

Chickweed.

Alſine media. C. B. 250.

L. 1. Ch. 1. III. Cl. 3. S. *A.* 3.

THE SCARLET TYGER MOTH. The *Caterpillar* lives all Winter, and is to be taken ſeeding on the *Hounds-Tongue*, *Nettles*, and *White Archangel*, at the End of *April*. If you look for them from *Charlton-Church*, in *Kent*, down to the Road that leads to *Woolwich*, there you will find them in Plenty. They make a Spinning in *May* amongſt the dead Leaves on the Ground, and there change to the *Chryſalis*. The *Moths* come forth in *June* and fly by Day.

See *Merian*, Vol. 2. Ch. 8. *Albin*, Pl. 22.

The Hounds Tongue in Flower.

Cynogloſſum majus, vulgare. C. B. 257.

L. 1. Ch. 1. IV. Cl. 3. S. *A.* 4.

THE BLACK ARCHES, a MOTH. The *Caterpillar* of this *Fly* remains in Egg all Winter, and hatching about the Middle of *April*, feeds on the Leaves of the *Oak*, *Apple* Trees, &c. A *Caterpillar* brought up by Mr. *Cabrier* came to its full Growth near the Middle of *June*; at which Time it faſtened itſelf, in the Corner of the Box, by a few ſmall Threads: The 14th it changed to a *Chryſalis*, and the *Moth* appeared the 4th of *July*. The *Caterpillar* was fed, in its infant State, with *Lettice*, there being no *Oak* Leaves at that Time. This *Moth* is to be found ſticking on the Barks of the *Oak* Trees in *Richmond*, *Buſhey*, and other Parks, in *July*; but is not common.

See *Merian*, Vol. 2. Ch. 22.

The Apple Tree in Bloſſom.

Malus.

V.

L. I. CH. I. **V.** CL. 3. S. *A.* 5.

THE GREAT ERMINE MOTH. Its *Caterpillar* feeds on moſt Kinds of Plants and Flowers; turns to a *Chryſalis*, within a Web on the Ground, in *September*: The *Moth* is bred in the *May* following, and may be ſound ſticking on the Barks of Trees, on Pales, Walls, *&c.*

The ſmall Garden Sun-Flower.

Corona Solis, perennis & vulgaris. Vaill.

L. I. CH. I. **VI.** CL. 3. S. *A.* 6.

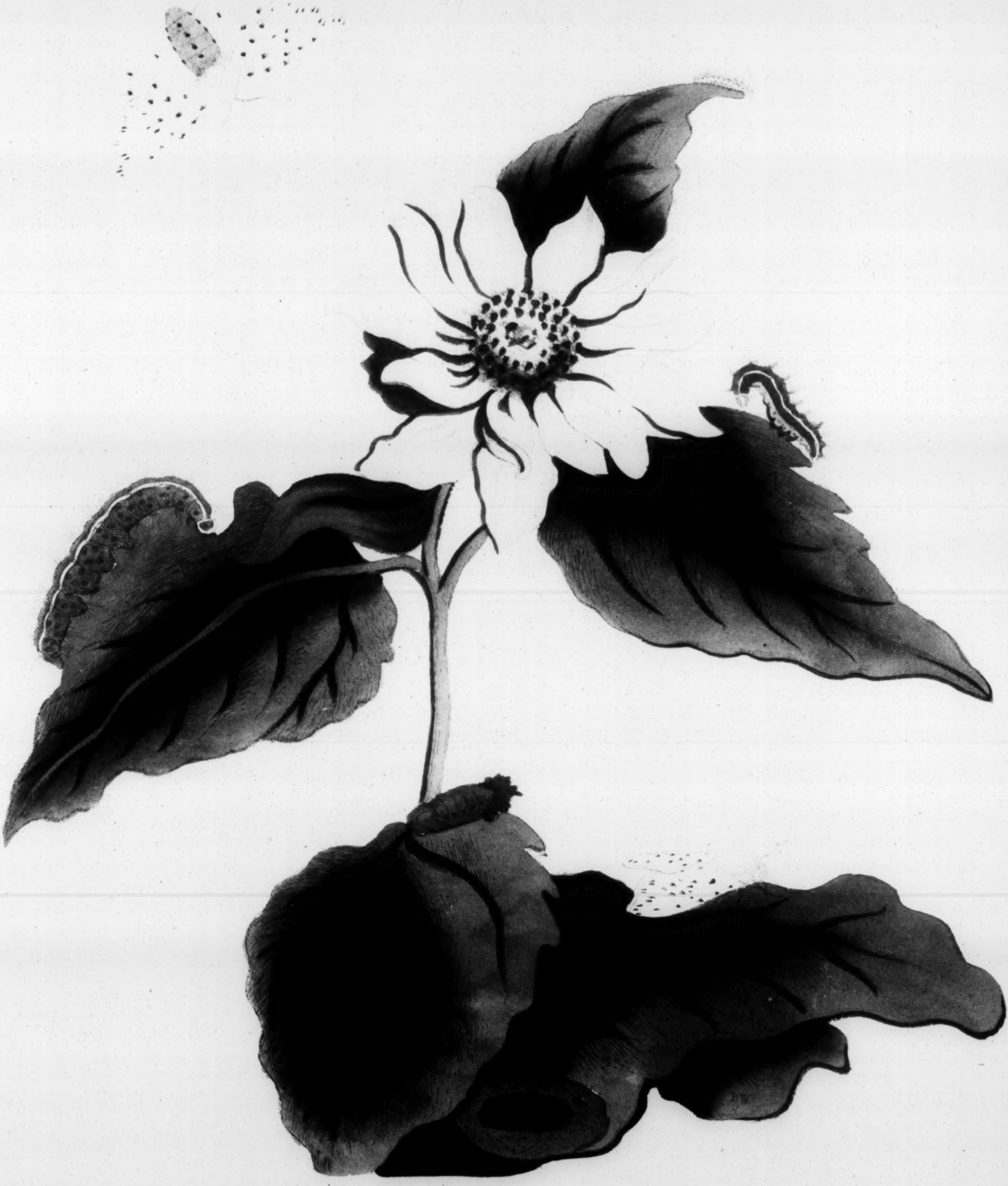
THE SPOTTED BUFF-MOTH. The *Caterpillars* of this *Moth* are very miſchievous in Gardens, feeding on moſt Kind of Herbage; but may eaſily be ſhaken off the Plants and killed. They change to the *Chryſalis* within a Web on the Ground, and ſometimes within the Ground, in *September*, and the *Moths* came out in *May*. Their Eggs are of a light green Colour; and the *Caterpillars*, when firſt hatch'd, which is about the Middle of *June*, are white and hairy. The *Moth* is frequently taken ſticking on Houſes, Walls, Pales, *&c.*

Arſmart.

Perſicaria maculoſa. Ger. 361.

L. I. CH. I. **VII.** CL. 3. S. *A.* 7.

THE GIPSEY MOTH. The *Caterpillars* are very deſtructive to all Fruit-trees, on which they are found in Swarms envelop'd with a Web like that of the Spider. In the Day-time they diſperſe themſelves over the whole Tree, but at Night come together again, and retire to their Web. They put on the *Chryſalis*, from within a Spinning, at the Beginning of *July*, and the *Moth* is bred about fourteen Days after. Their Eggs are covered with a yellowiſh Down, whereby they are preſerved from Cold throughout the Winter. This *Moth* is very common in *Germany*, and was produced from a Neſt of Eggs that were ſent to Mr. *Peter Collinſon*, who gave them to *Charles Lockyer*, Eſq; He bred *Moths* from them as above mentioned; and, having turned Numbers of them wild (as I have been informed) about



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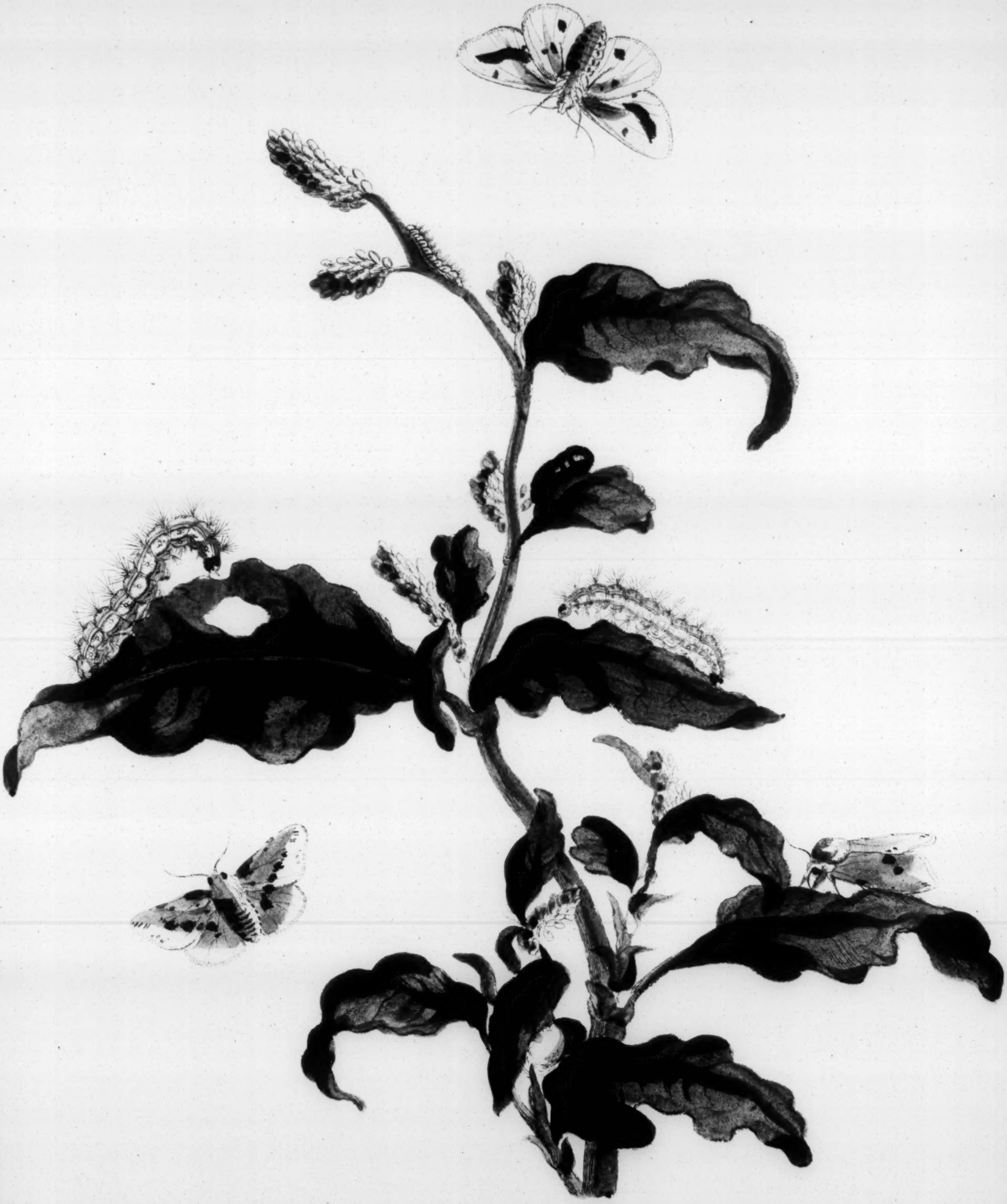
Cl. 3. S. 1. 6.



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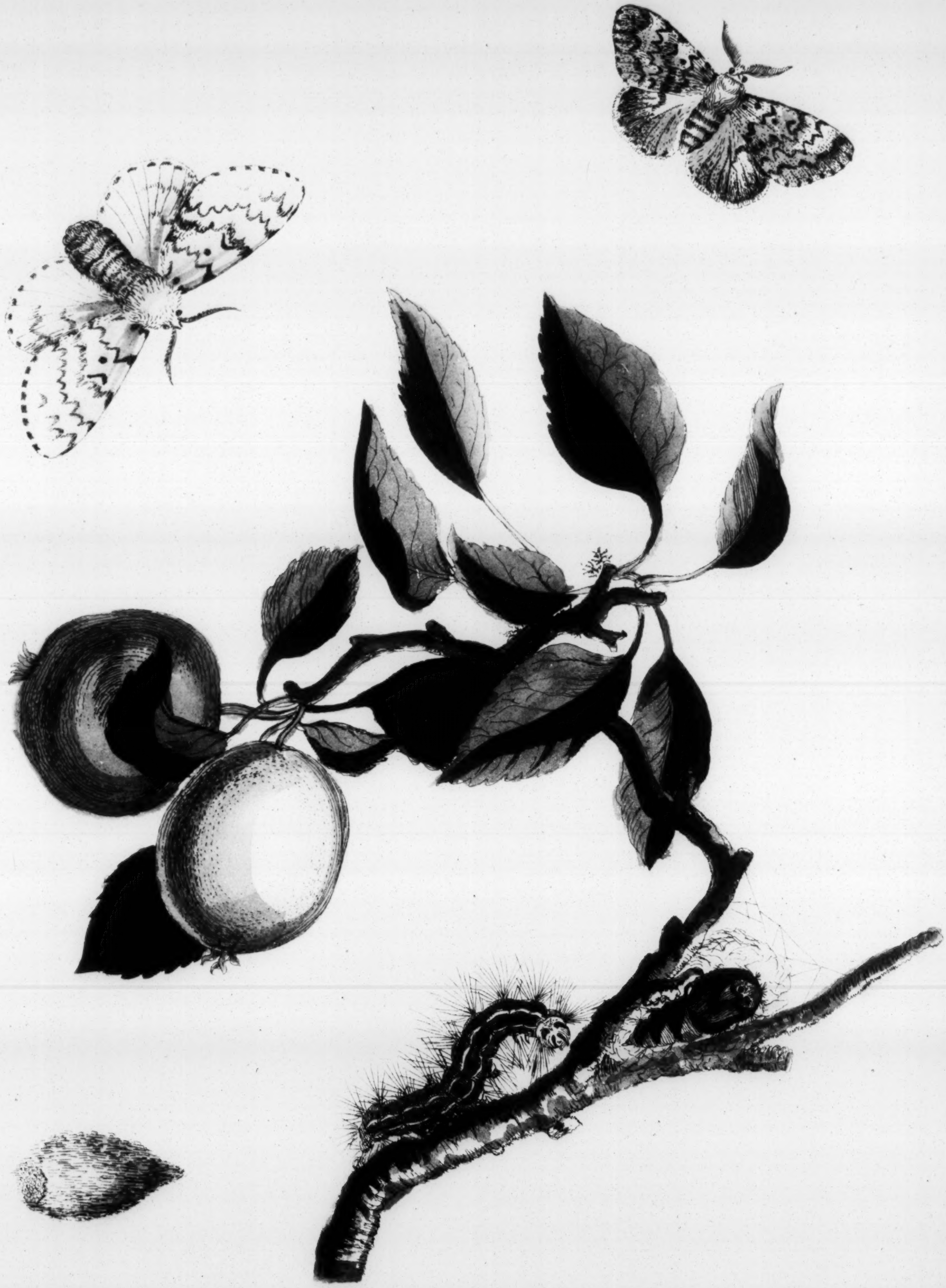

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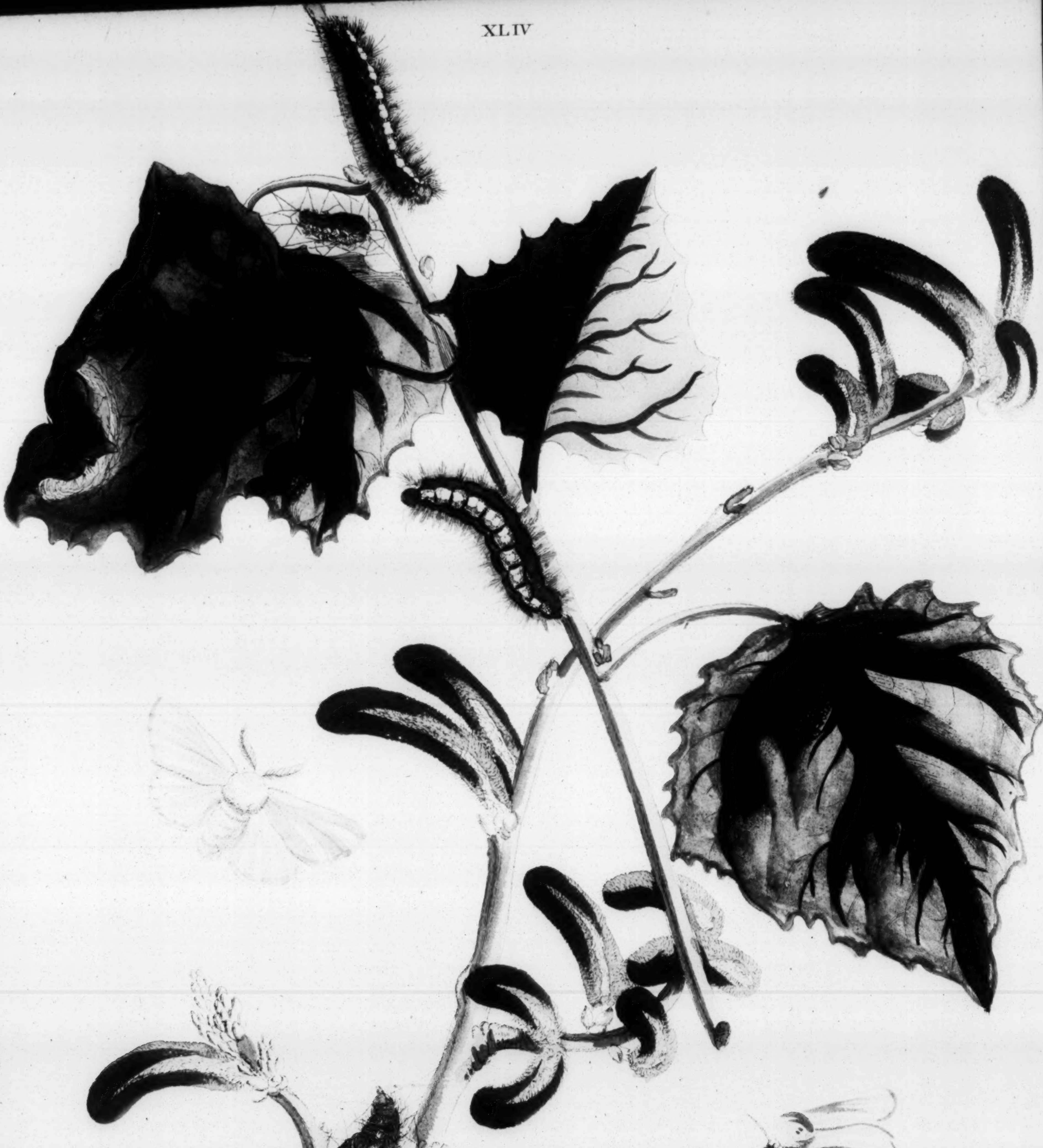
XLIV



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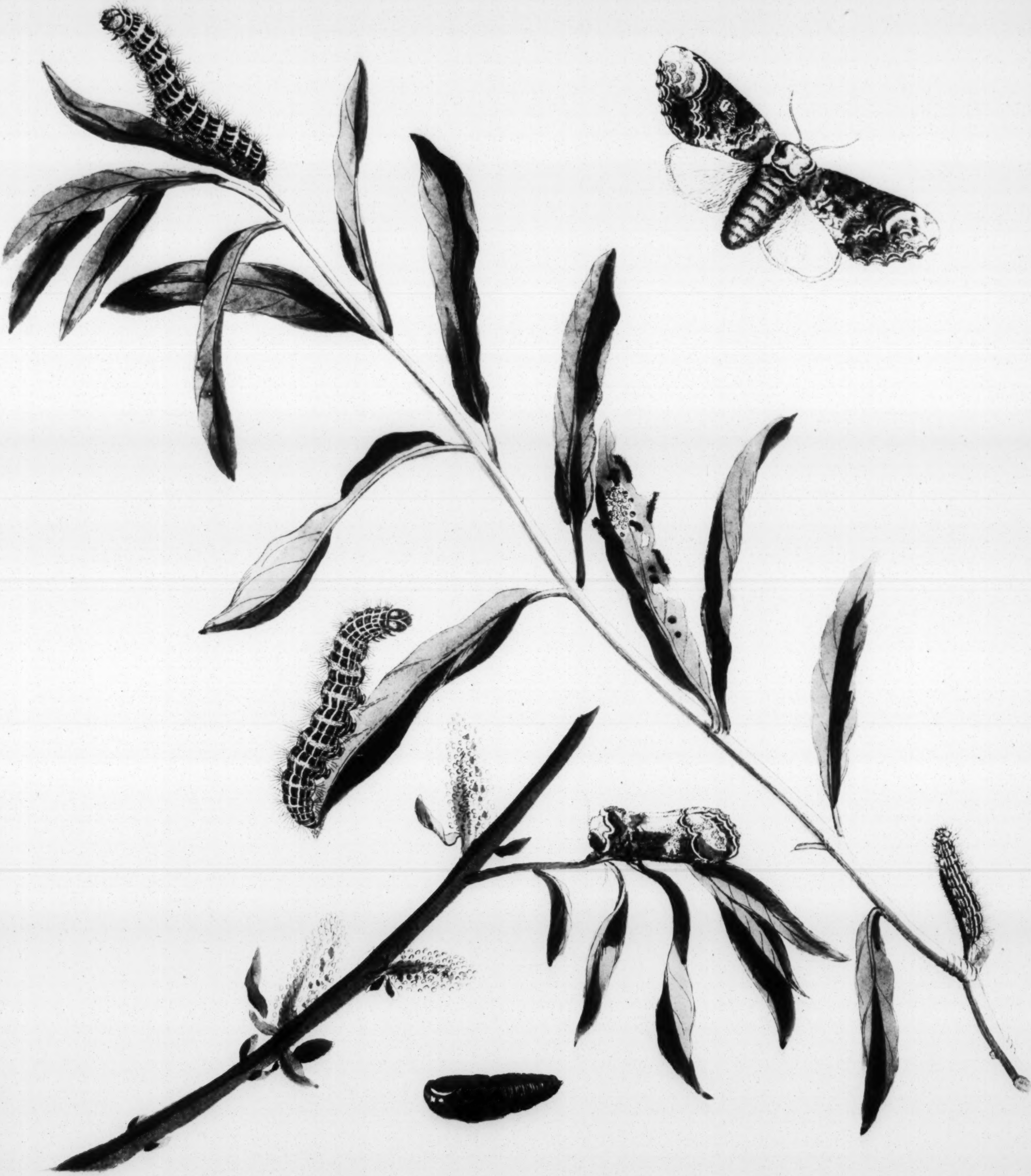


about *Ealing*, near *Brentford*, in *Middleſex*, they are to be found there, but not any where elſe that I have yet heard of.

See *Roſel*, Cl. 2. Tab. 3. *Merian*, Vol. 1. Ch. 18.

The Crab-tree.

Malus ſylveſtris. Ger. 1276.

L. I. Ch. I. VIII. Cl. 3. S. *A.* 8.

THE BUFF-TIP MOTH. The *Caterpillar* feeds on the *Willow* and *Oak*, and may be eaſily found amongſt the *Willows* growing about *Chelſea*, and in ſuch like Places. They may be taken full fed towards the End of *Auguſt*; at which Time Numbers of them go into the Earth, and there Change to the *Chryſalis*, and the *Moths* appear in the following *May*. It is not a very common Thing to take this *Moth* flying.

See *Liſter's Godart*. N. 95. *Raii* Hiſt. Inſect. P. 162. N. 14. *Albin*, Pl. 23. *Roſel*, Cl. 2. Tab. 14.

The Yellow Dwarf-Willow.

Salix folio longo ſubluteo, non auriculata, viminibus luteis. Raii. Syn.

L. I. Ch. I. IX. Cl. 3. S. *A.* 9.

THE WHITE-SATIN MOTH. Its *Caterpillar* feeds on the *White Poplar*, as alſo on *Willow*; changes to a *hairy Chryſalis*, within the Leaves ſpun together, in *June*; lies in that State about twenty Days, and then the *Moth* flies abroad. You may take theſe Flies by ſhaking the Boughs of the Trees they feed on. Their Eggs, when firſt laid, are of a pale green Colour, which they cover with a Subſtance looking like Leaf-ſilver. They continue about one Month in the Egg-ſtate, and the *Caterpillars* live all Winter.

See *Liſter* on *Godart*. P. 84. N. 87. *Roſel*, Cl. 2. Tab. 9. *Reaumur*, Pl. 34. Pag. 534. Vol. 1.

The White Poplar-Tree.

Populus alba majoribus foliis. C. B.

L. I. Ch. I. X. Cl. 3. S. *A.* 10.

THE LACKEY-MOTH. The *Caterpillars* are very common, and feed on moſt Kind of Herbage, eſpecially *Black Thorn*, *White Thorn*, &c. about the Middle of *June* they change to the *Chryſalis* within a Caſe, which they ſpin, and cover with a fine Duſt of the Colour of Brimſtone. In this State they remain for about one Month; then the *Moth* appears, and lays her Eggs, in a ſpiral Order, round the young Twigs of ſuch Trees as are proper Food for the infant *Caterpillars.* They hatch in the Spring, and keep together in a Web while young. As theſe *Caterpillars* are deſtructive in Gardens to Fruit-trees, *&c.* its adviſeable to deſtroy them.

See *Godartius*, P. 1. Tab. 10. *Albin*, Pl. 19. *Roſel*, Cl. 2. Tab. 6. *Reaumur*, Vol. 2. Pl. 4. Pag. 120.

Figure 1. Tway Blade. 2. The Crane's Bill. 3. The Yellow-Vetchling.

1. *Bifolium, vulg.* C. B. 2. *Geranium Robertianum.* 3. *Lathyrus luteus ſylveſtris dumetorum.* I. B. II. 304.

L. 1. Ch. 1. XI. Cl. 3. S. A. 11.

THE GREAT EGGER-MOTH. The *Caterpillars* of this *Moth* are to be ſound, full grown, towards the End of *May*, feeding on *Black Thorn* and *White Thorn.* At the Beginning of *June*, they ſpin a brown Caſe, in the Shape of an Egg, in which the *Chryſalis* is formed: They remain in that State for about one Month; then the *Moth* is produced. The Males fly ſwiftly in the Day-time, from 12 o' Clock to 5 in the Afternoon. The Eggs are of an oval Shape, and uſually hatch at the latter End of *July*. When the *Caterpillars* are young, you may feed them with *Black Thorn*, or *White Thorn*, and, during the Winter, with *Bramble*, *Holly*, *Privet*, *&c.* When you breed any female *Egger-Moths*, take one of them and put it in a Box (covered with a Piece of Crape, to prevent its getting away), carry the Box with you to the Sides of Woods and green Lanes; and, if the Day be fair, and the Sun ſhines bright, put it upon the Ground: And, if there is a Breed of theſe *Moths* near, the Males will come and endeavour to get at the Female. By this means I have taken with my Net near twenty in an Hour. This Method of taking Flies is called *Sembling*; and many other Kinds of *Moths* are to be catched the ſame Way.

See *Godart.* P. 1. Tab. 7. *Liſter's Godart.* N. 88. *Merian*, Vol. 1. Ch. 10. *Mouſet*, P. 92 N. 9. *Raii's* Hiſt. Inſect. P. 142. N. 2. *Albin*, Pl. 18. *Roſel*, Cl. 2. Tab. 35. a. *Reamur*, Pl. 35. Pag. 534. Vol. 1.

The White Thorn in Flower.

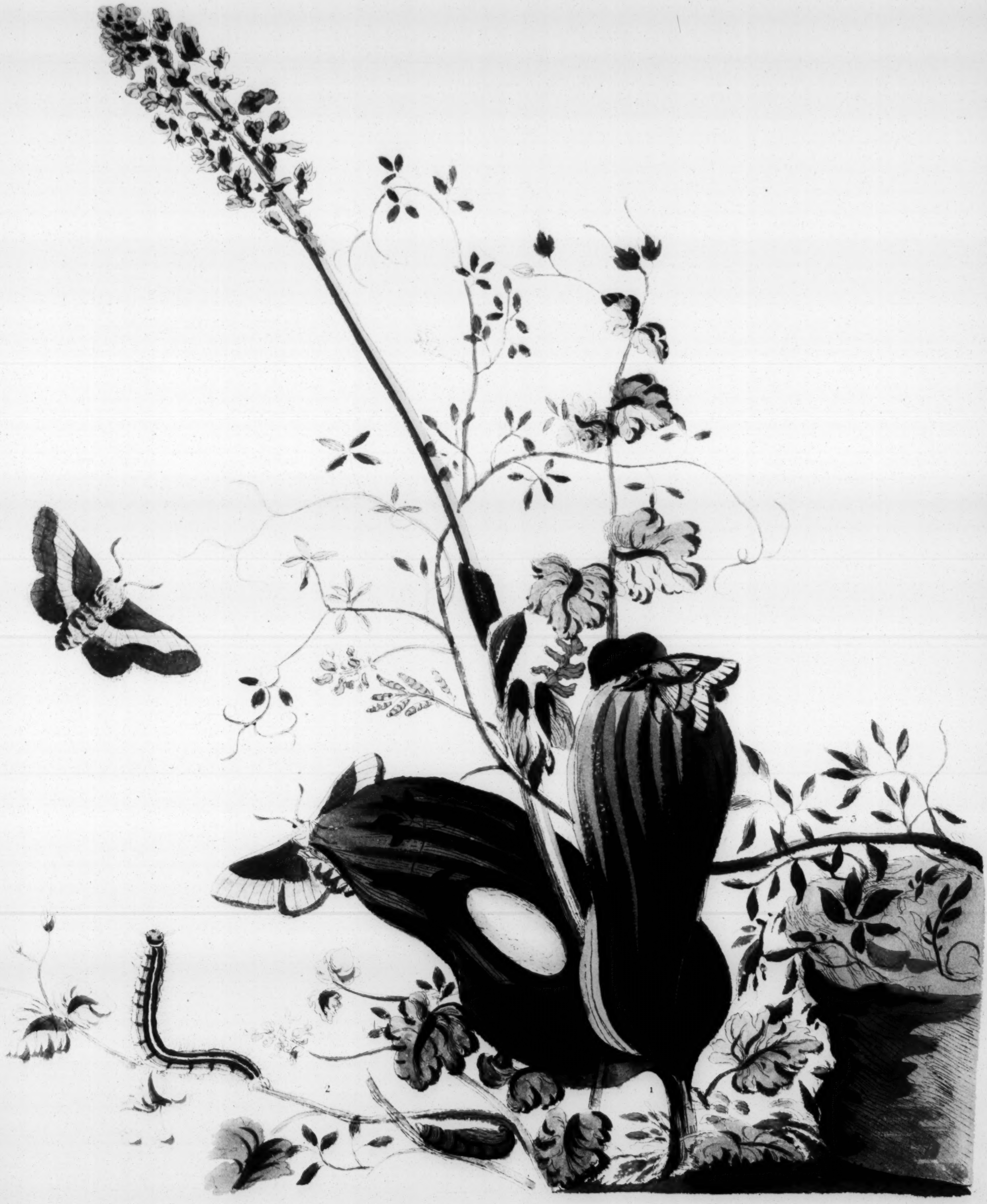
Meſpilus ſylveſtris, ſeu Oxyacantha.

XII.

h.1.

XLV

Th. 2. S. 120.



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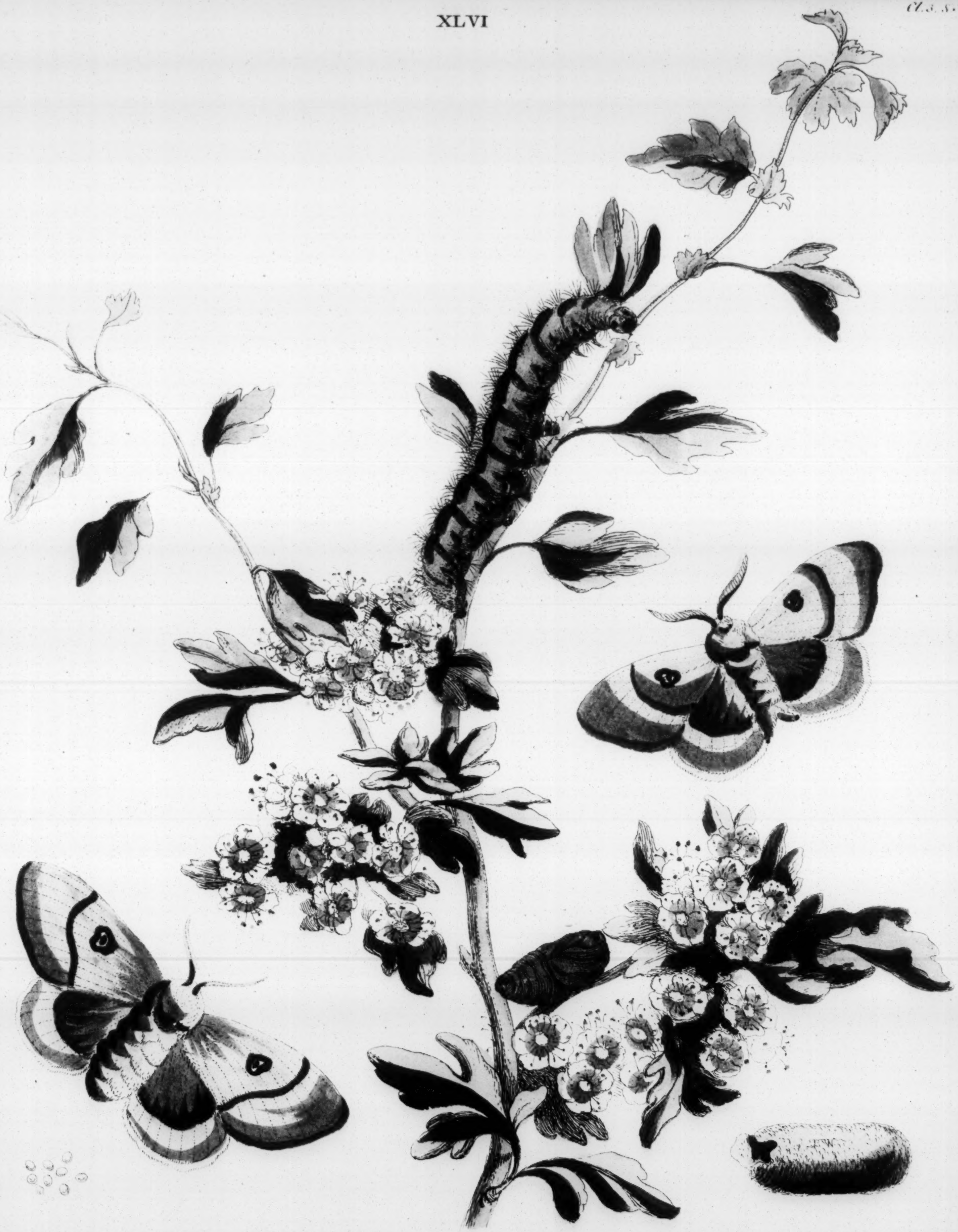

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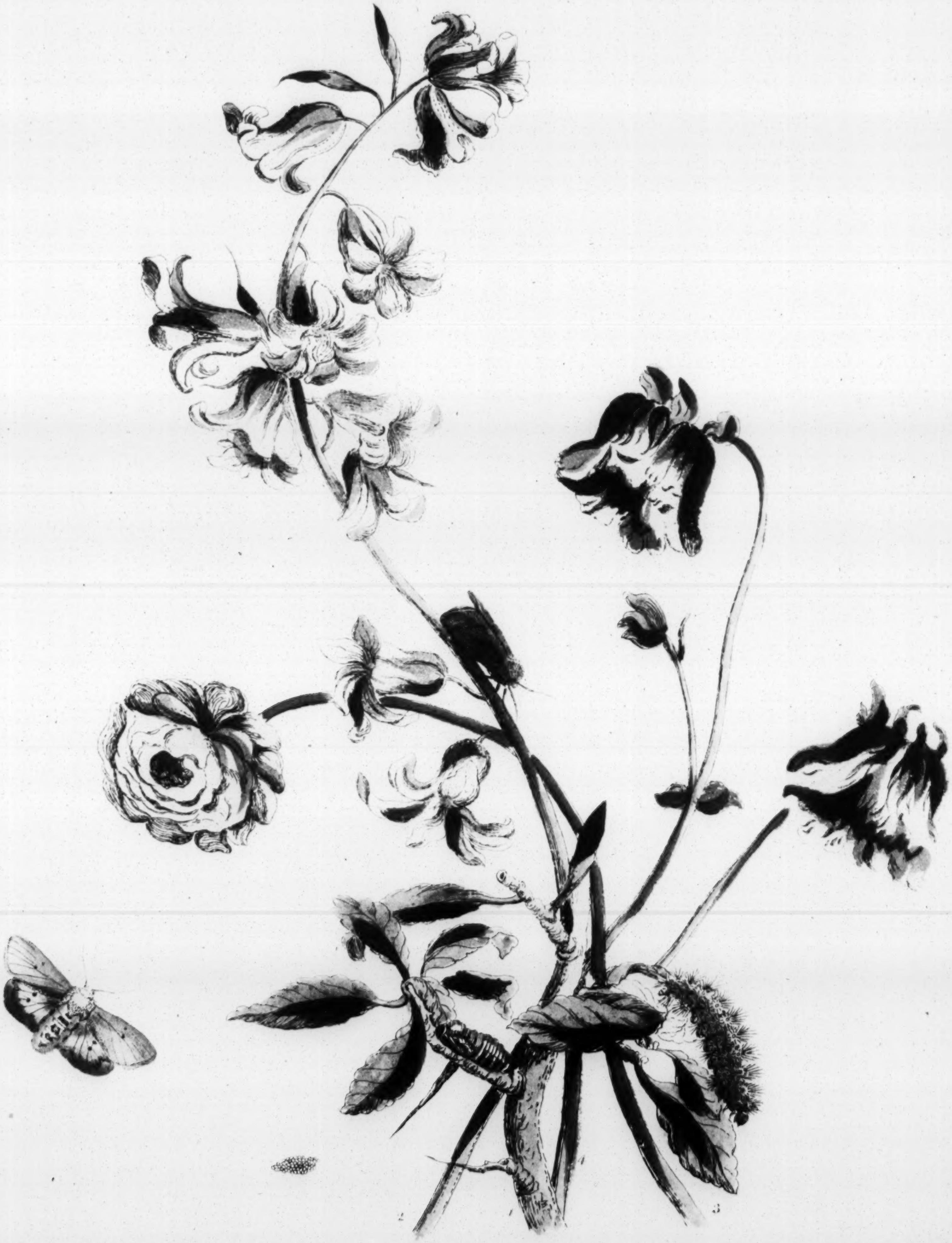

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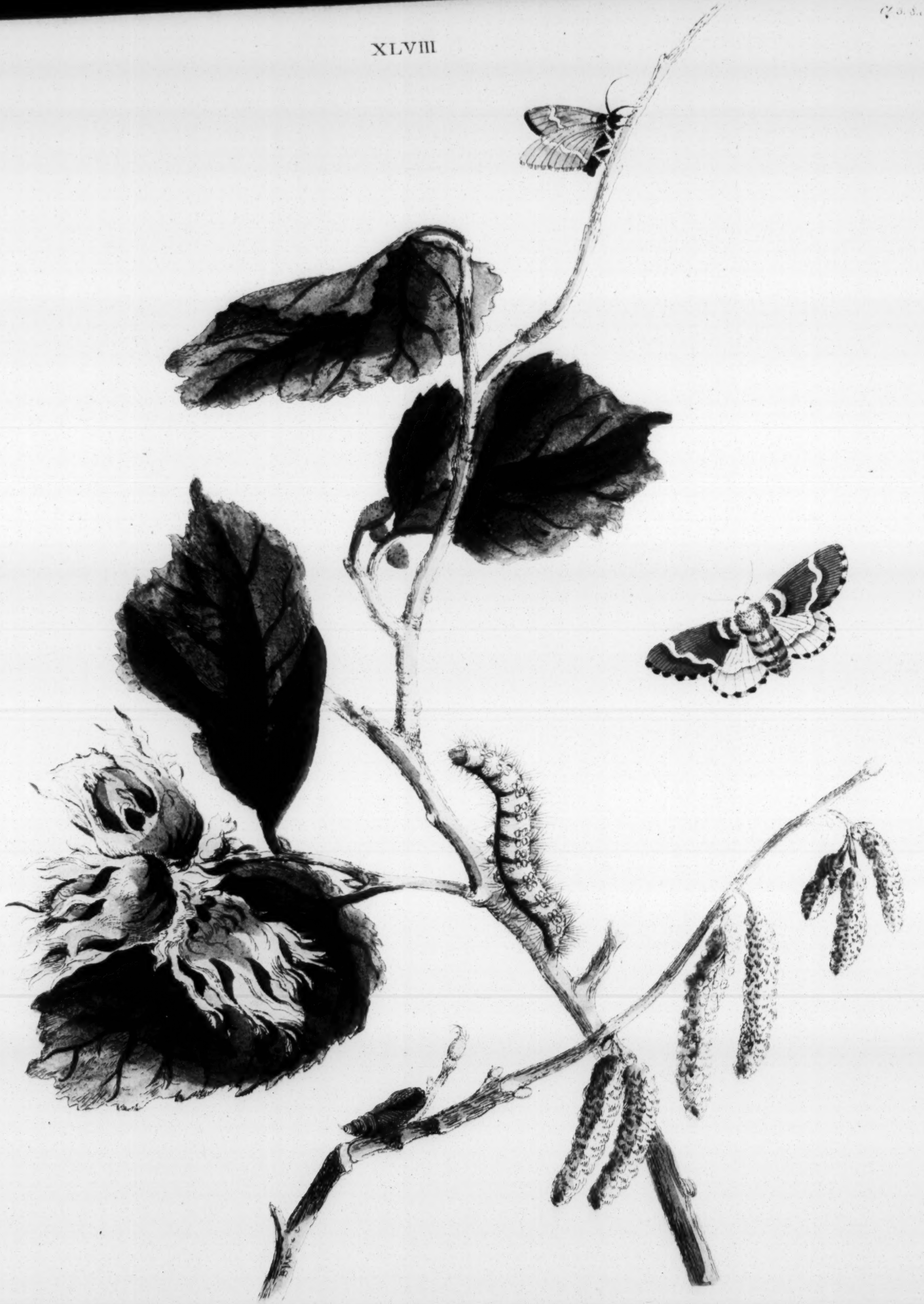

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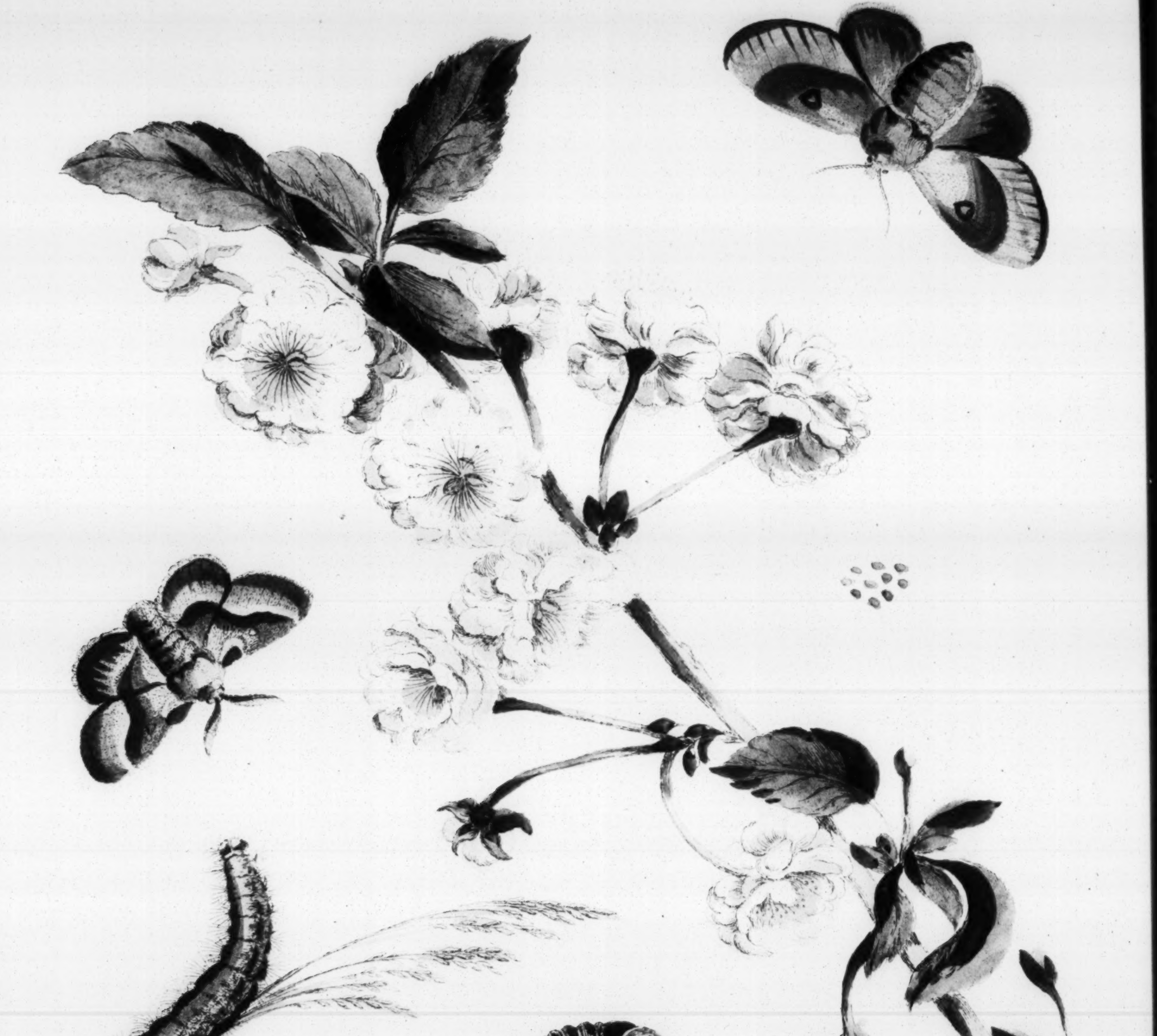

L. I. Ch. I. Cl. 3. S. *A.* 12.

XII.

THE GRASS EGGER-MOTH. I took the *Caterpillars* of this *Moth* feeding on *Clover* amongſt *Graſs*. They make a Spinning and Caſe, on the Surface of the Earth, about the Middle of *June*, and therein turn to a *Chryſalis*. The *Moth* flies in the Middle of *Auguſt*; but is not commonly met with.

See *Roſel*, Cl. 2. Tab. 35. b.

The double flowering Cherry, and Graſs.

Ceraſus hortenſis, flore roſeo. C. B. Pin. 450.

L. I. Ch. I. Cl. 3. S. *A.* 13.

XIII.

THE DECEMBER MOTH. Mr. *Dandridge* took ſome of its *Caterpillars*, at the Beginning of *June*, on the *Haſle*; but, obſerving they eat but little, gave them freſh Boughs that were wet with Rain, on which they fed greedily. The next Day he gave them Water and Honey mixt together, of which they drank a good Quantity, and fell to eating again very heartily. In this Manner he fed them every Day, and ſometimes twice a Day, till the Middle of the ſame Month, when they went into the Earth and changed into *Chryſalis*. The *Moths* came out at the End of *December*. I took this Year (1748) two of theſe *Caterpillars* on the Leaves of an *Oak*, wherewith I fed them till the Middle of *June*, when they ſpun a dirty coloured Caſe which contained the *Chryſalis*; and the *Moths* were bred on the 24th *October*.

See *Albin*, P. 85. *Roſel*, Cl. 2. Tab. 60.

The Nut-tree.

Corylus, Sativa, *fructu anguloſo.* C. B. 418.

L. I. Ch. I. Cl. 3. S. *A.* 14.

XIV.

THE SPOTTED RED and WHITE UNDERWING MOTH. I found and fed the *Caterpillar* on *Black Thorn*: It made a Spinning, and changed to *Chryſalis*

Chryſalis in the Middle of *April*, and the *Moth* came abroad about the Middle of *May*. The *Caterpillar* lives all Winter, and the *Moth* is rarely to be met with.

See *Roſel*, Cl. 2. Tab. 43.

Figure 1. The Black Thorn. 2. The Columbine. 3. The Ranunculus. 4. The White Bells.

1. *Prunus ſylveſtris.* C. B. 2. *Aquilegia vulgaris ſimplex.* C. B. 3. *Ranunculus.* 4. *Hyacinthus, flore albo.* C. B.

L. 1. Ch. 1. — Cl. 3. S. *A.* 15

XV.

THE WOOD TYGER MOTH. This *Moth* I firſt diſcovered in *Cain Wood*. The *Caterpillar* lives all Winter, feeds on *Chickweed*, *Lettice*, the *Leſſer Plantain*, &c. and is full grown about the Middle of *April*, when it changes to the *Chryſalis* within a Spinning. The *Moth* is bred in the Middle of *May*, flies by Day, and may be taken in *Cain* or *Tottenham* Woods; an Afternoon is the beſt Time.

The Vredenriek Hyacinth, and Leſſer Plantain.

Hyacinthus Belgicus Vredenrick dictus. *Plantago minor.* I. B.

L. 1. Ch. 1. — Cl. 3. S. *A.* 16.

XVI.

THE MOTHER of PEARL MOTH. *Nettles* are the Food of the *Caterpillar*, within the Leaves of which (folded together) it lives, and feeds till the Beginning of *June*; when it puts on the *Chryſalis* Form wrapt up within a Leaf, whoſe Edges are faſtened by a Spinning: Fourteen Days after the *Moth* appears, and may be taken, very commonly, in an Evening, amongſt *Nettles*.

See *Albin*, P. 73. *Roſel*, Cl. 4. Tab. 4.

The Cherry-Plumb.

Prunus, fructu majori, rotundo, rubro. Tourn.

L. 1. Ch. 1. — Cl. 3. S. *A.* 17.

XVII.

THE YELLOW JULY OAK-MOTH. The Food of the *Caterpillar* is the Leaves of the *Oak* Tree, on which it feeds till the Middle of *June*; then it changes

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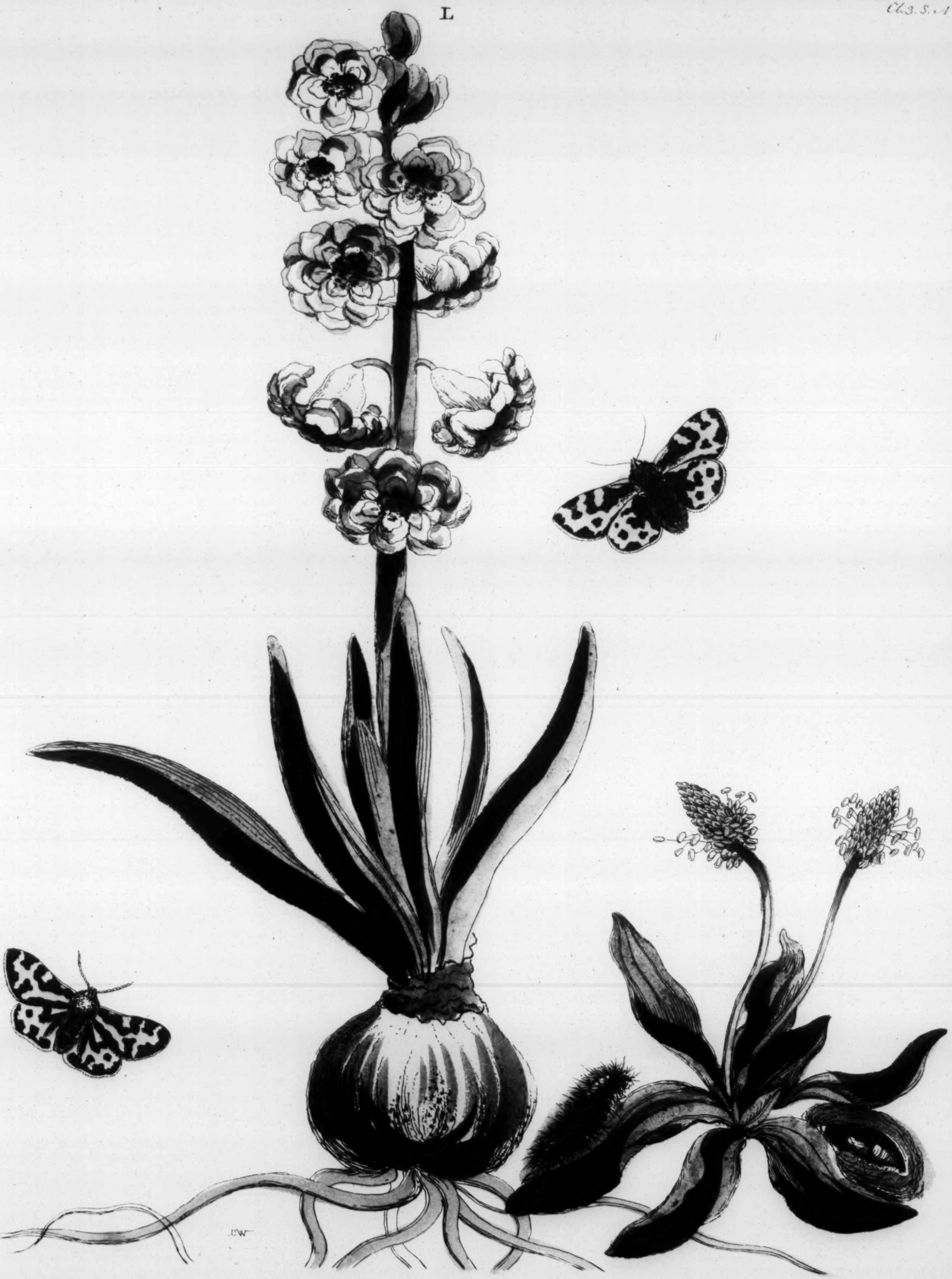
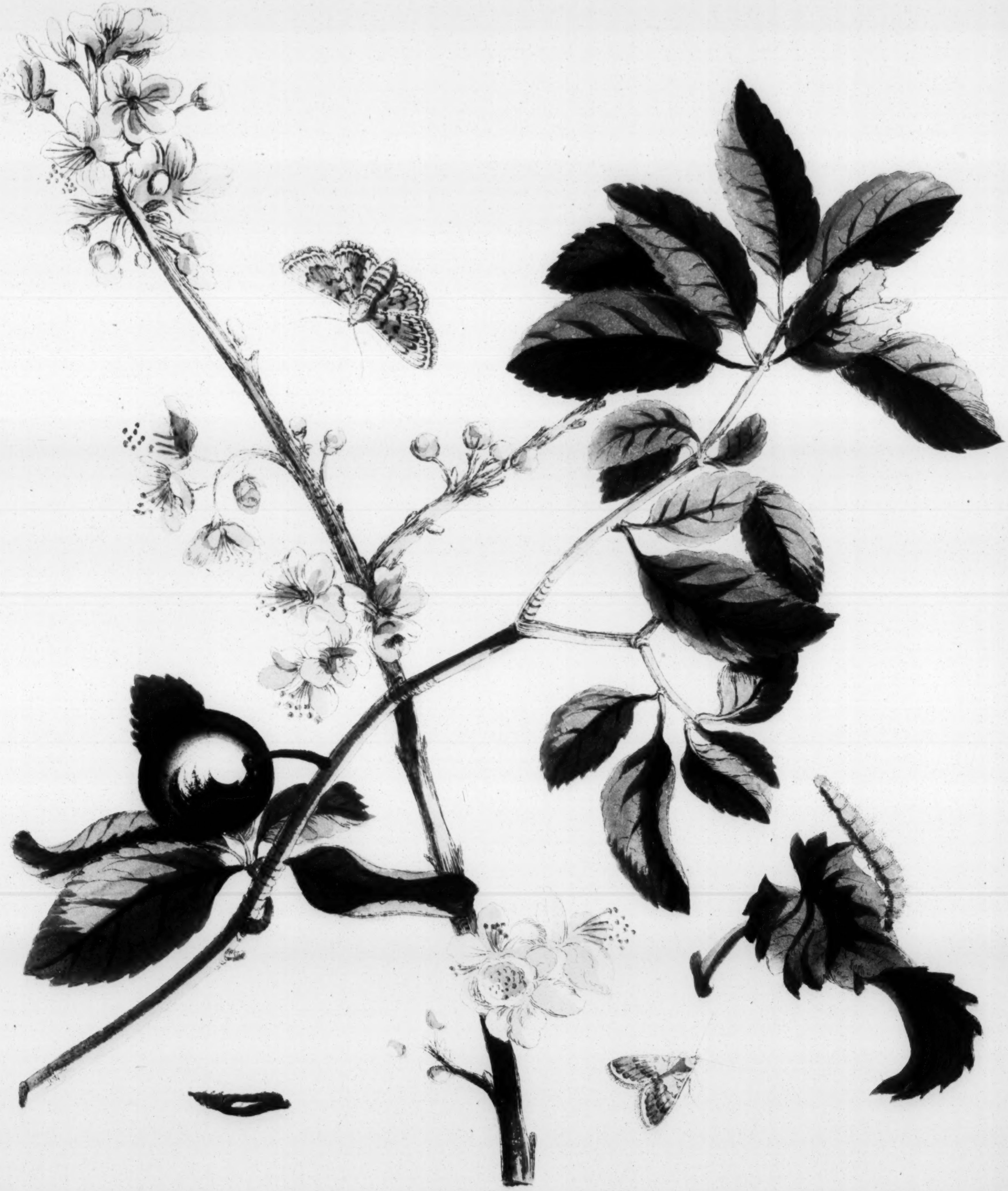
Cl.3. S. A 15.





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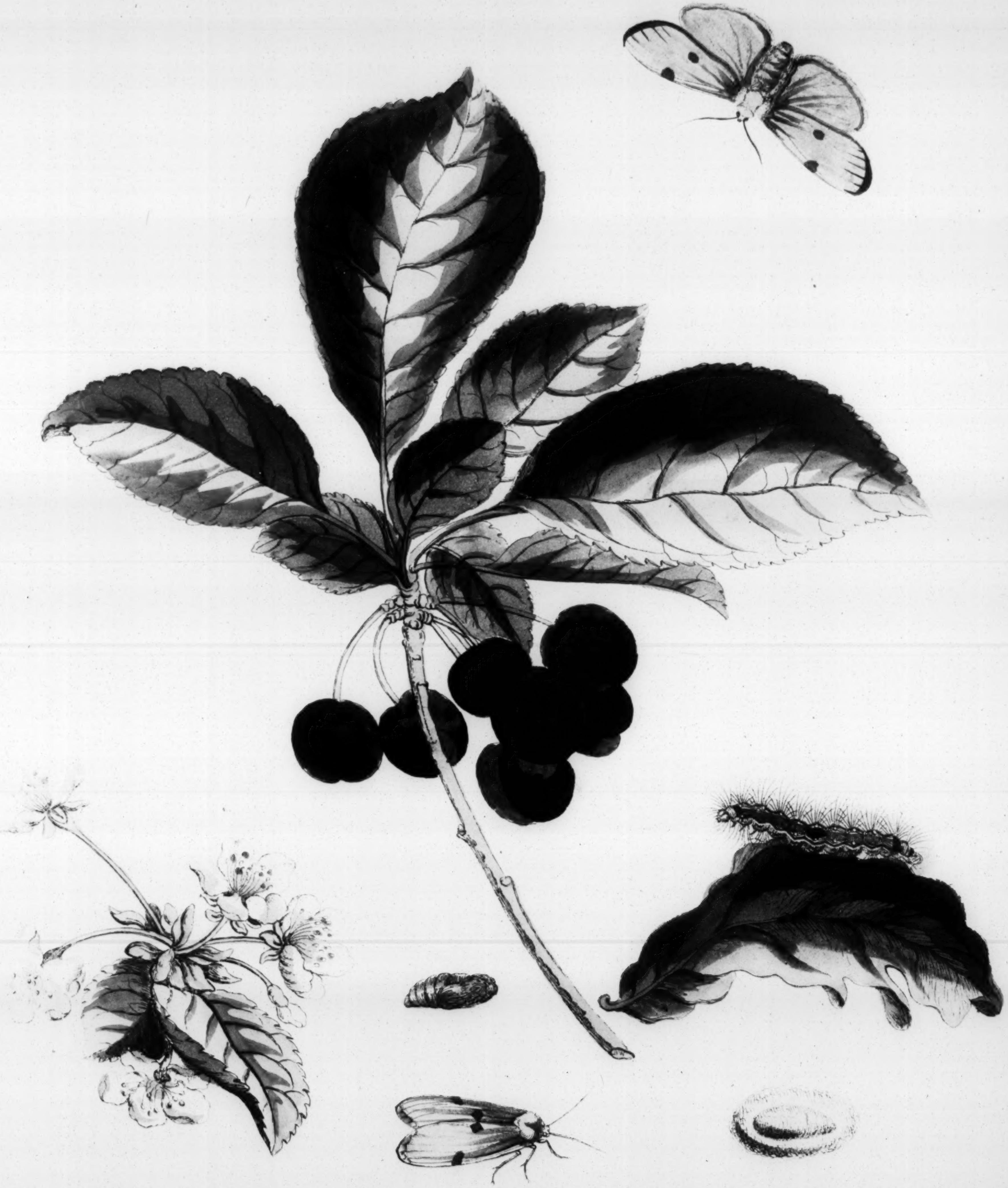

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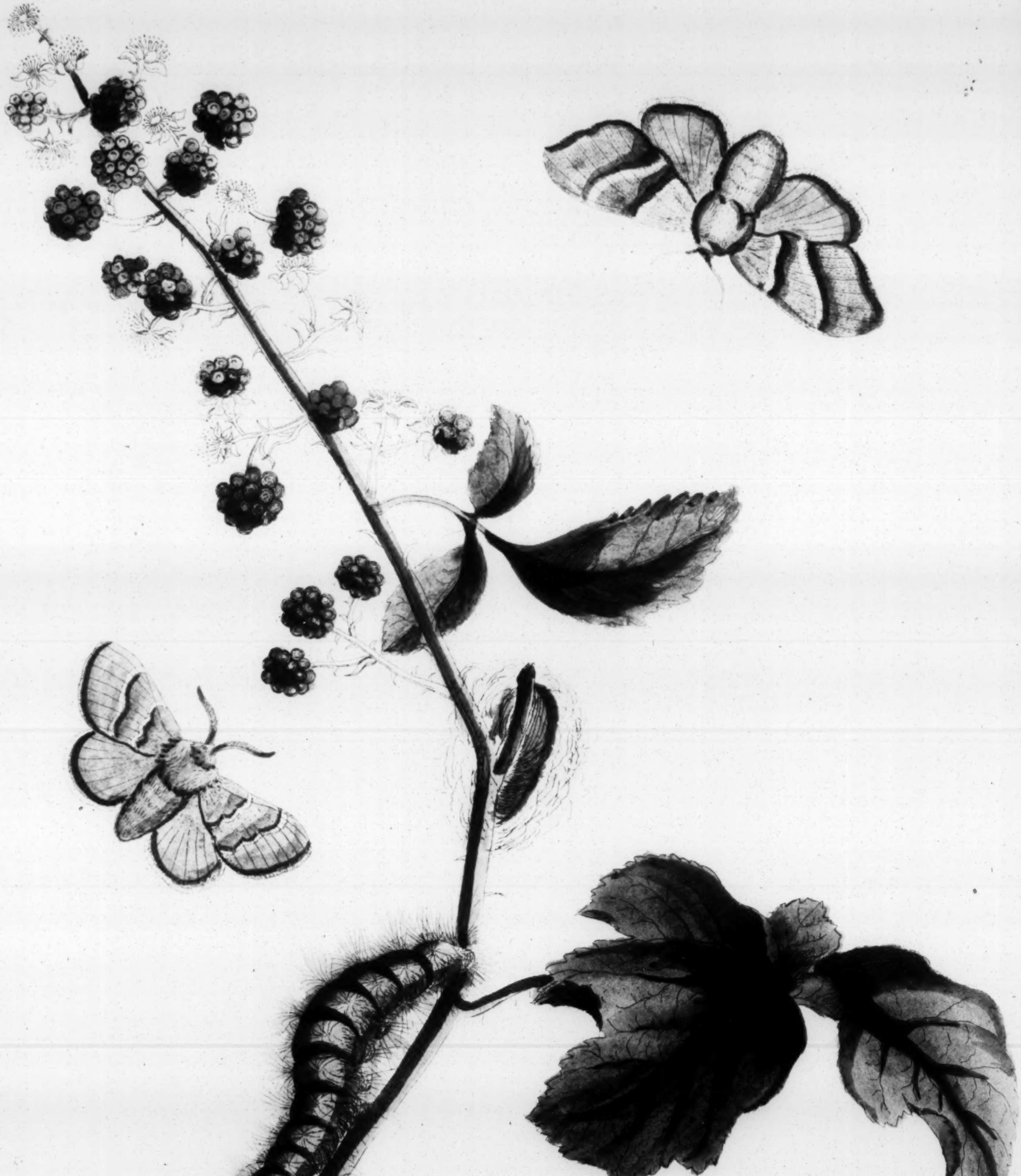
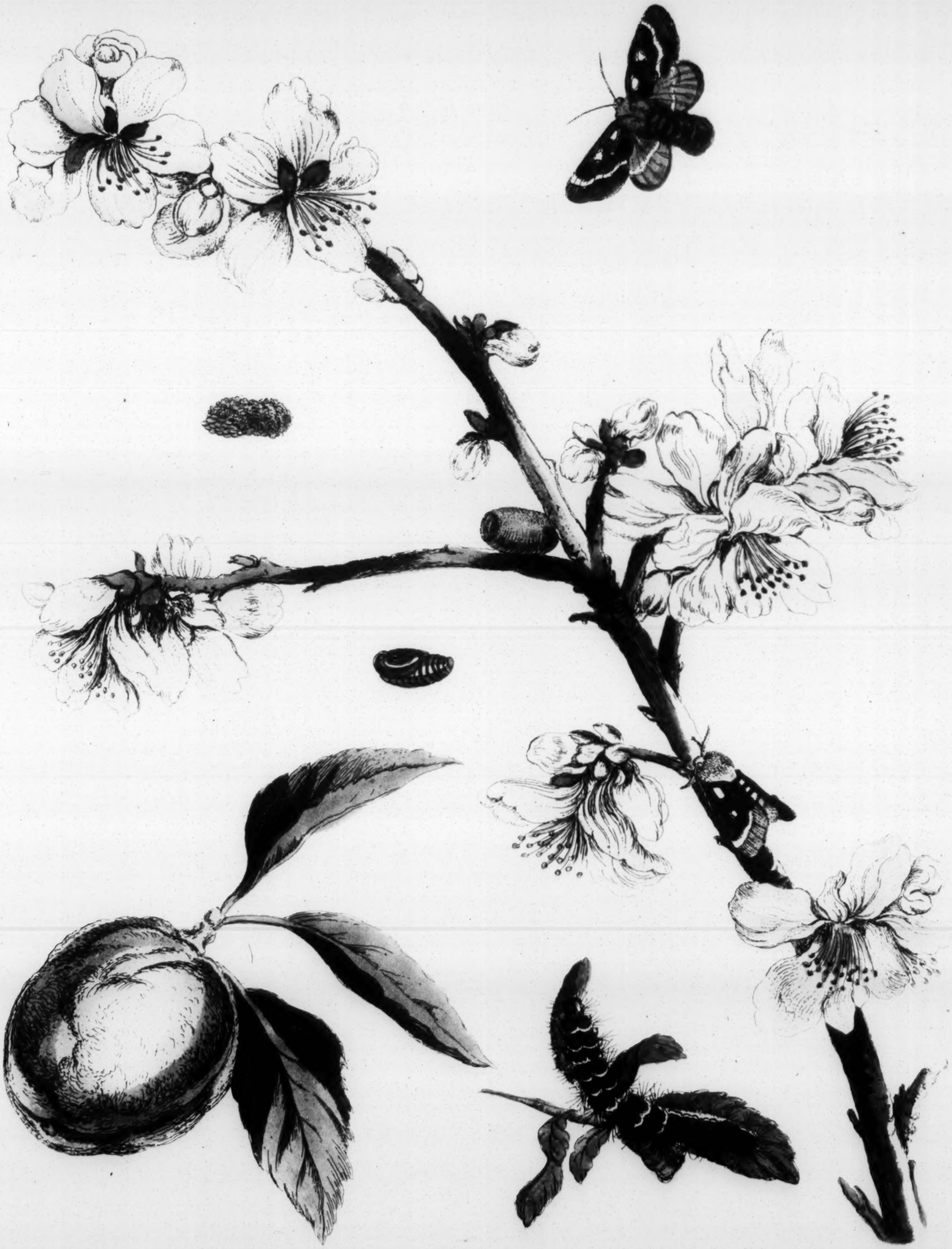




changes to a *Chryſalis* in ſome Chink or other that it meets with in the Bark of the ſaid Tree, over which Chink or Hole the *Caterpillar* ſpins a ſtrong Web, which prevents any Bird or Inſect from getting at it in its *Chryſalis* State. The *Moth* is bred in the Middle of *July*, and may, now and then, be found on the Barks of the *Oak* Trees in *Richmond* and other Parks, about that Time; but it is not a common Fly.

See *Roſel*, Cl. 2. Tab. 17.

The May-cherry.

Ceraſus, majalis, fructu duro ſubdulci. Tourn.

L. I. Ch. I

XVIII.

Cl. 3. S. *A.* 18.

THE SMALL EGGER-MOTH. *Black* and *White Thorn* are the Food of the *Caterpillars*, which are always found in Colonies; the whole Neſt of them feeding together till they are ready to change. When they are firſt hatch'd from the Egg, they ſpin a Web to ſhelter themſelves from the Weather; and, as they grow, enlarge it with ſeveral Diviſions. They ſeldom go from the Plant they are firſt hatched on, till they have eaten it quite bare and want Food. They ordinarily ſpin a Thread from their main Web to guide them Home again; this is very particular, and ſeems neceſſary to them. About the Beginning of *July* you may find them full fed; then they ſpin a Web, within which a Caſe is formed, ſhaped like an Egg, which contains the *Chryſalis:* In this State they remain all Winter, and the *Moths* are bred in *March.* It is adviſeable, if you feed the *Caterpillars*, to take the whole Neſt with the Web. I have ſeldom taken the *Moths*.

See *Roſel*, Cl. 2. Tab. 62. *Albin*, P. 19.

The Almond Tree, Bloſſom and Fruit.

Amygdalus ſativa fructu majore. C. B. Pin. 441.

L. I. Ch. I.

XIX.

Cl. 3. S. *A.* 19.

THE FOX COLOURED MOTH. The *Caterpillar* is hatch'd in *July*, lives all Winter, and feeds on *Graſs*, *Brambles*, *&c.* I have ſeen them in *September* as large as they are in the Middle of *April*, which is the Time they go to *Chryſalis*, within a Spinning or Web. The *Moth* is bred in the Middle of *May*, and the Cock flies ſwiftly in an Afternoon; but may be taken in a Net, by the Sides of Woods and green Lanes.

See *Albin*, P. 81.

The Black-berry Fruit.

Rubus, fructu nigro.

SECT. 2 *A.*

CATERPILLARS *having* Rings *of* different Colours *ſurrounding them.*

L. 1. Ch. 1. I. CL. 3. S. 2 *A.* 1.

THE CINNABAR-MOTH. The *Caterpillars* of this Fly are ſociable and feed together in Numbers on the *Ragwort*; in *July* they are full grown, and then ſome go into the Earth, and others ſpin on the Surface of the Ground, in order to their Change into the *Chryſalis* State. The *Moths* are produced in the *May* following, and are common in Fields and Gardens.

See *Liſter* on *Godart*. P. 61. N. 54. *Albin*, Pl. 34. *Roſel*, Cl. 2. Tab. 48. *Reaumur*, Pl. 16. Pag. 342. Vol. 1.

The Ragwort, in Flower.

Jacobea, vulgaris. J. B. H. 1057.

SECT. 3 *A.*

CATERPILLAR'S *having* indented Markings.

L. 1. CH. 1. I. CL. 3. S. 3 *A.* 1.

THE BRAMBLE MOTH. Its *Caterpillar* is to be found feeding on the *Bramble*, on the *Oak*, &c. at the Beginning of *September*; and, towards the Middle of the ſame Month, it changes to a *Chryſalis*, mixing its Hairs with the Bag it ſpins: The *Moth* comes forth the *May* following, and is not very common.

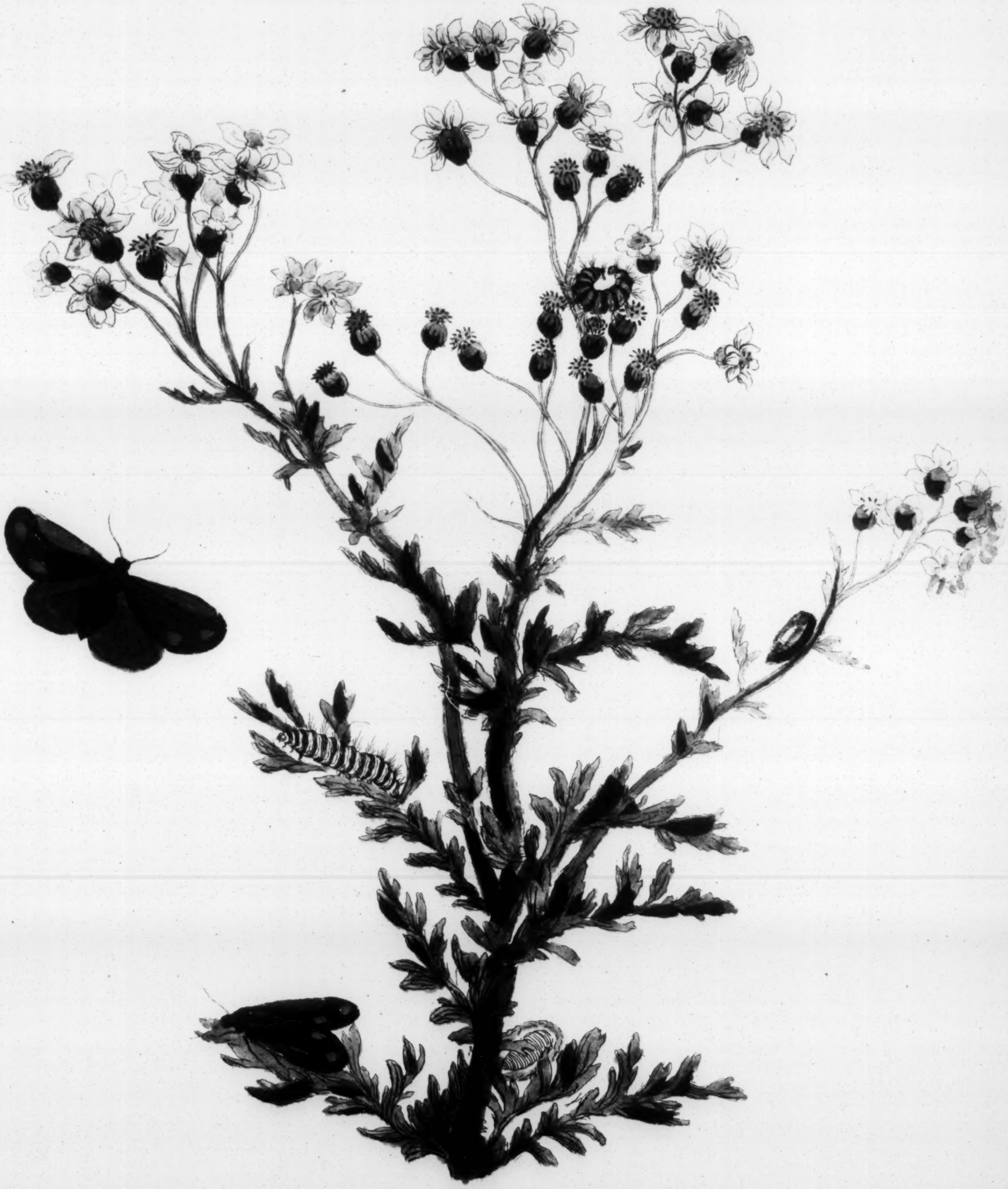
The Orange Apricock.

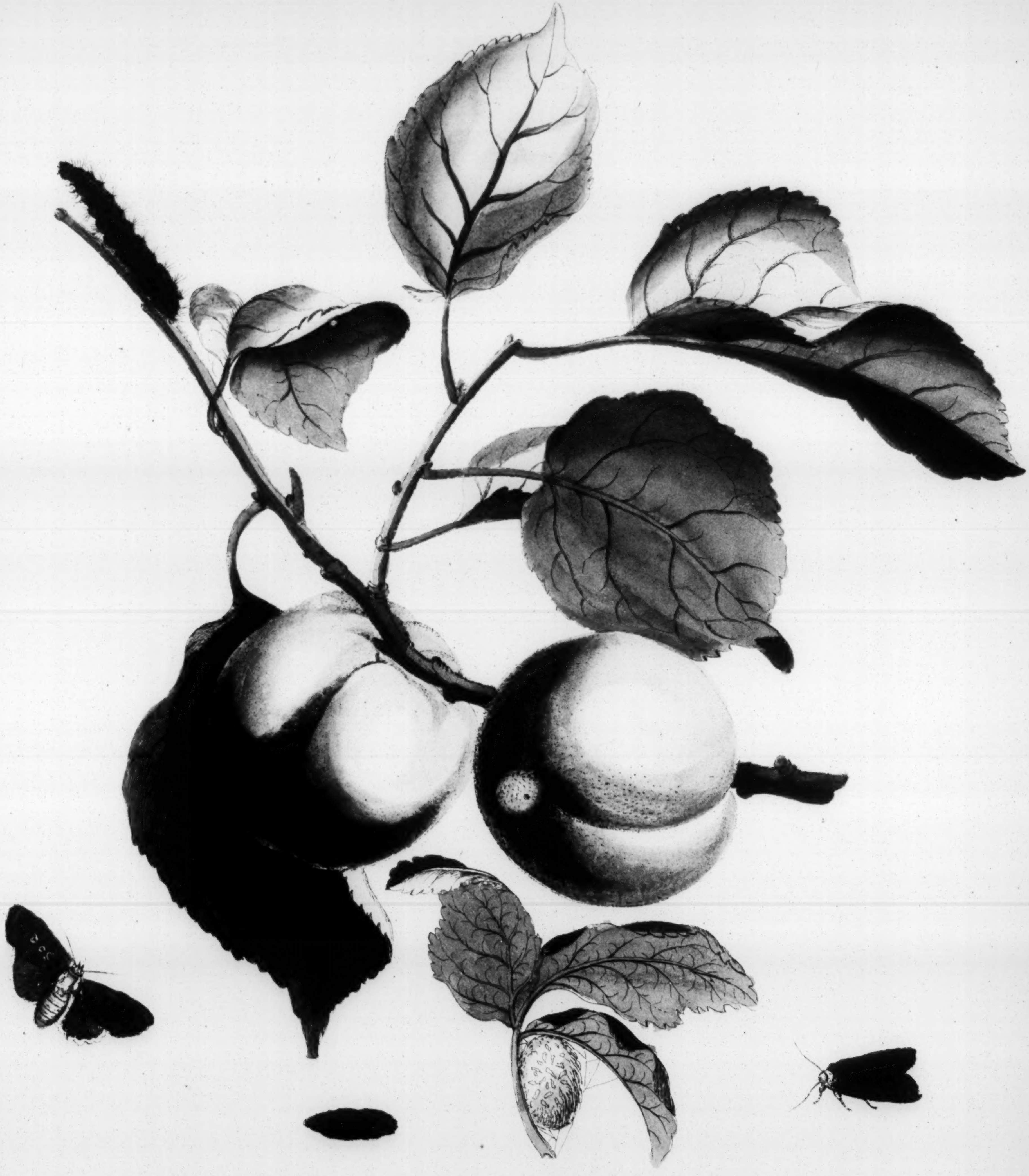
Malus Armeniaca, fructu aurantio.

SECT. *b.*

LV

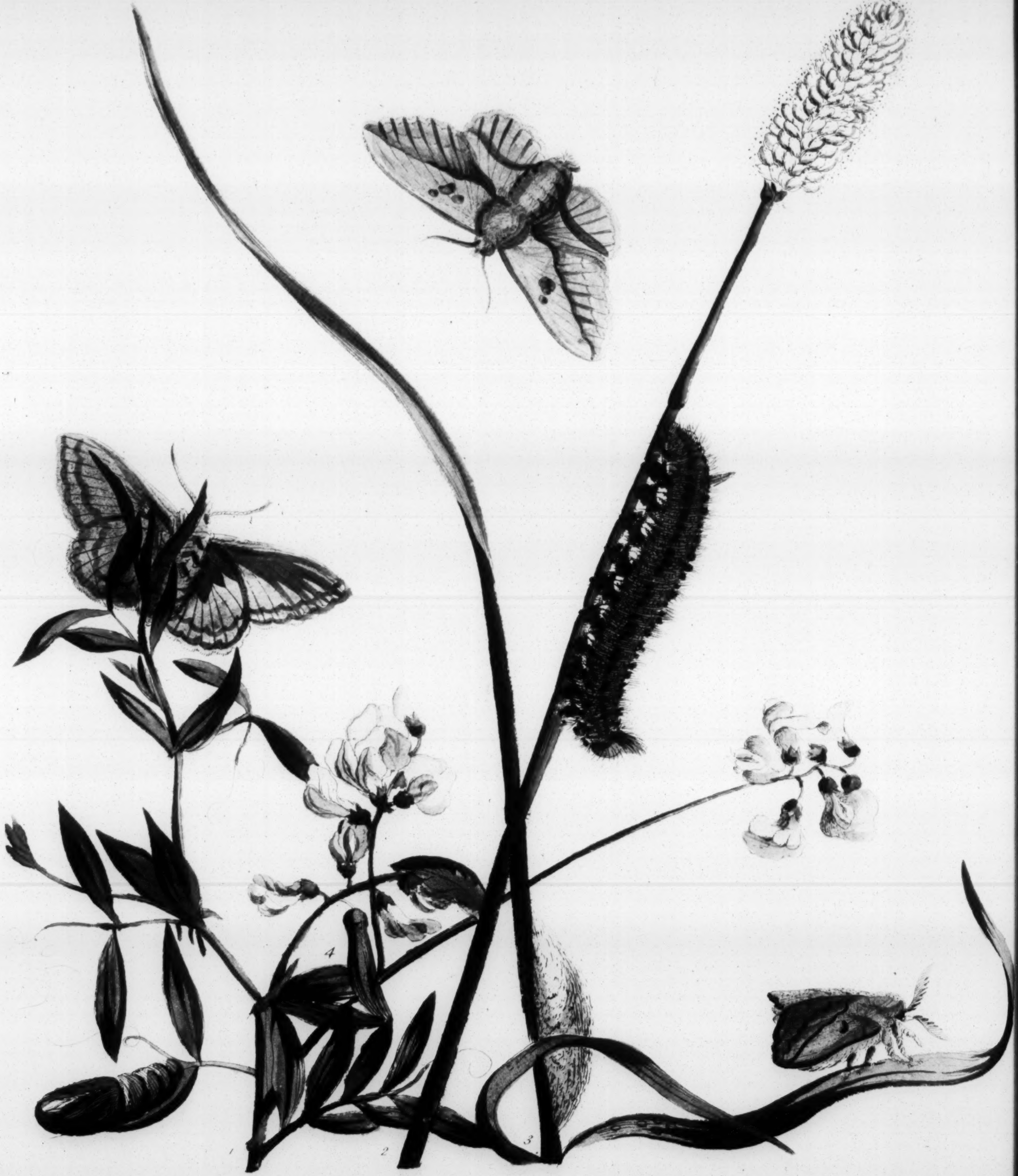
Cl. 3. S. 2.





L.1. Ch.1.

Cl.2. S.1



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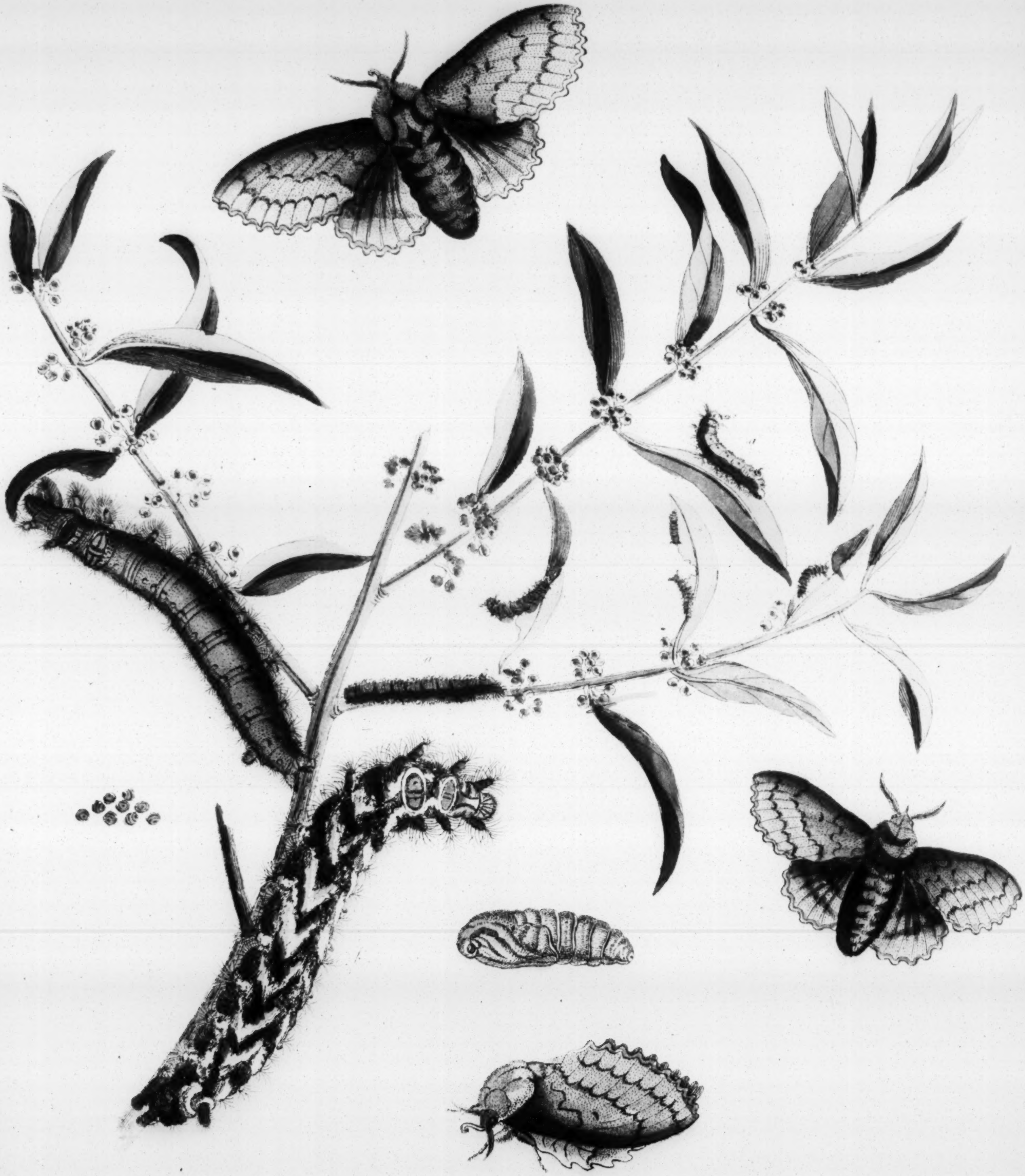
Cl.381



SECT. *b.*

CATERPILLARS *having* hairy, *or* fleſhy Protuberances, *on the* Head, Back, *or* Tail.

L. I. CH. I. I. CL. 3. S. *b.* I.

THE LAPPIT-MOTH. The Eggs of this *Moth* are laid about the Middle of *July*, and remain in that State fourteen Days. I fed the *Caterpillars*, when firſt hatch'd, with *Black Thorn*, and continued giving them the ſame Food till *October*; at which Time they were in their fourth Skin, and appeared as repreſented at Letter *a*: They there ſtretched themſelves at full Length on the Twigs, and remained ſo till the *April* following, without eating any thing that I could perceive, notwithſtanding at different Times I put in freſh green Food to try them. About the End of *May* the *Caterpillars* are full grown, in which Condition *b* repreſents the Female; they then make a Spinning, within which the *Chryſalis* is formed, and remains in that State for one Month, when the *Moth* is bred; though it is rarely met with in the Fly-ſtate. The *Caterpillars* are to be found, at the End of *May*, ſticking cloſe to the Boughs of the *Black Thorn*, *Bramble*, *&c.* You muſt look for them about a Foot or two from the Ground; but, as their Colour nearly reſembles the Bark of their Food, it is very difficult to ſee them.

See *Albin*, Pl. 16. *Roſel*, Cl. 2. Tab. 41. *Merian*, Vol. I. Ch. 17. *Reaumur*, Pl. 23. Pag. 322. Vol. 2.

The Privet leaved Phylerea.

Phyllyrea, Liguſtri folio. C. B.

L. I. CH. I. II. CL. 3. S. *b.* 2.

THE DRINKER-MOTH. Its Eggs are uſually laid about the Middle of *July*; in about fourteen Days the *Caterpillars* come out: They feed in the Winter-ſeaſon on long *Graſs*, *&c.* and change to *Chryſalis* at the End of *May* (within ſuch a Caſe as is expreſſed in the Plate) at which Time they are eaſily found upon the Graſs, by the Sides of Fields and Hedges. The *Moths* are bred at the End of *June*, and may be taken flying in an Evening, in green Lanes and by the Sides of Woods.

See *Liſter's Godart.* N. 82. *Albin*, Pl. 17. *Raii* Hiſt. Inſect. P. 142. N. 3. *Roſel*, Cl. 2. Tab. 2.

Figure 1. The Yellow Vetchling. 2. Biſtort. 3. The White Darnell Graſs. 4. The Wood-Peaſe.

1. *Lathyrus ſylveſtris, dumetorum, flore luteo.* C. B. *Biſtorta major.* I. B. 3. *Gramen loliaceum ſpica longiori.* C. B. 4. *Aſtragalus ſylvaticus.* Ger. Emac.

L. 1. Ch. 1. Cl. 3. S. *b*. 3.

III.

THE YELLOW-TAIL MOTH. The *Caterpillar* feeds on *Elder*, *Oak*, *Black Thorn*, &c. upon all which Growths you may find them at the End of *May*. It changes to a *Chryſalis*, within a Spinning, at the Beginning of *June*, and the *Moth* comes forth at the End of the ſame Month. They may be found ſticking againſt the Barks of the Trees in Parks, and other Places, and alſo flying in the Evening. They lay Eggs of a pale Colour, and cover them with a woolly Subſtance. The *Caterpillars* are hatch'd in *Auguſt*, and will feed on *Black Thorn* till the End of *October*; at which Time they ſpin themſelves little Caſes, and remain in them till the Spring following.

See *Roſel*, Cl. 2. Tab. 21. *Reaumur*, Pl. 16. Pag. 342. Vol. 1.

The Alder-Tree.

Alnus, rotundifolia, glutinoſa, viridis. C. B.

L. 1. Ch. 1. Cl. 3. S. *b*. 4.

IV.

THE DAGGER MOTH. The *Caterpillar* feeds on *Roſe* Trees, Fruit-trees, and Shrubs; becomes a *Chryſalis* within the Earth in *October*, and in *May* following the *Moth* appears, and may be found ſticking againſt Pales, Walls, Trees, &c. Their Eggs are very ſmall, and of a fine green Colour, and the *Caterpillars* are common in Gardens and other Places. It is obſerved, that the Protuberance on the Back of the *Caterpillar* is of a fleſhy Subſtance, with Hair growing out of it.

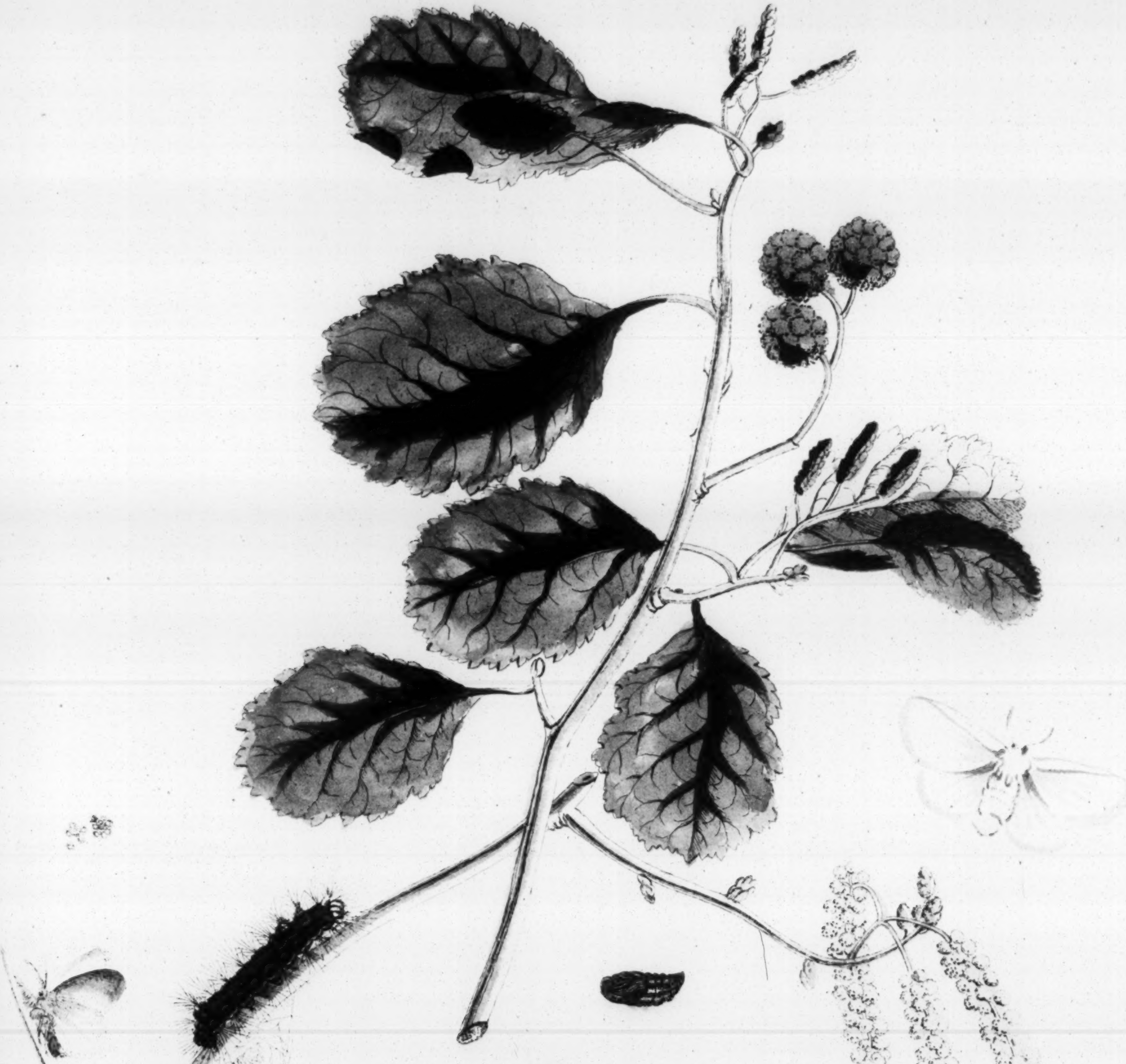
See *Albin*, P. 86. *Roſel*, Cl. 2. Tab. 7. *Reaumur*, Pl. 42. Pag. 602.

The moſt double Sweet-Briar Roſe.

Roſa ſylveſtris, ſive Eglanteria, flore pleno.

V.

LIX



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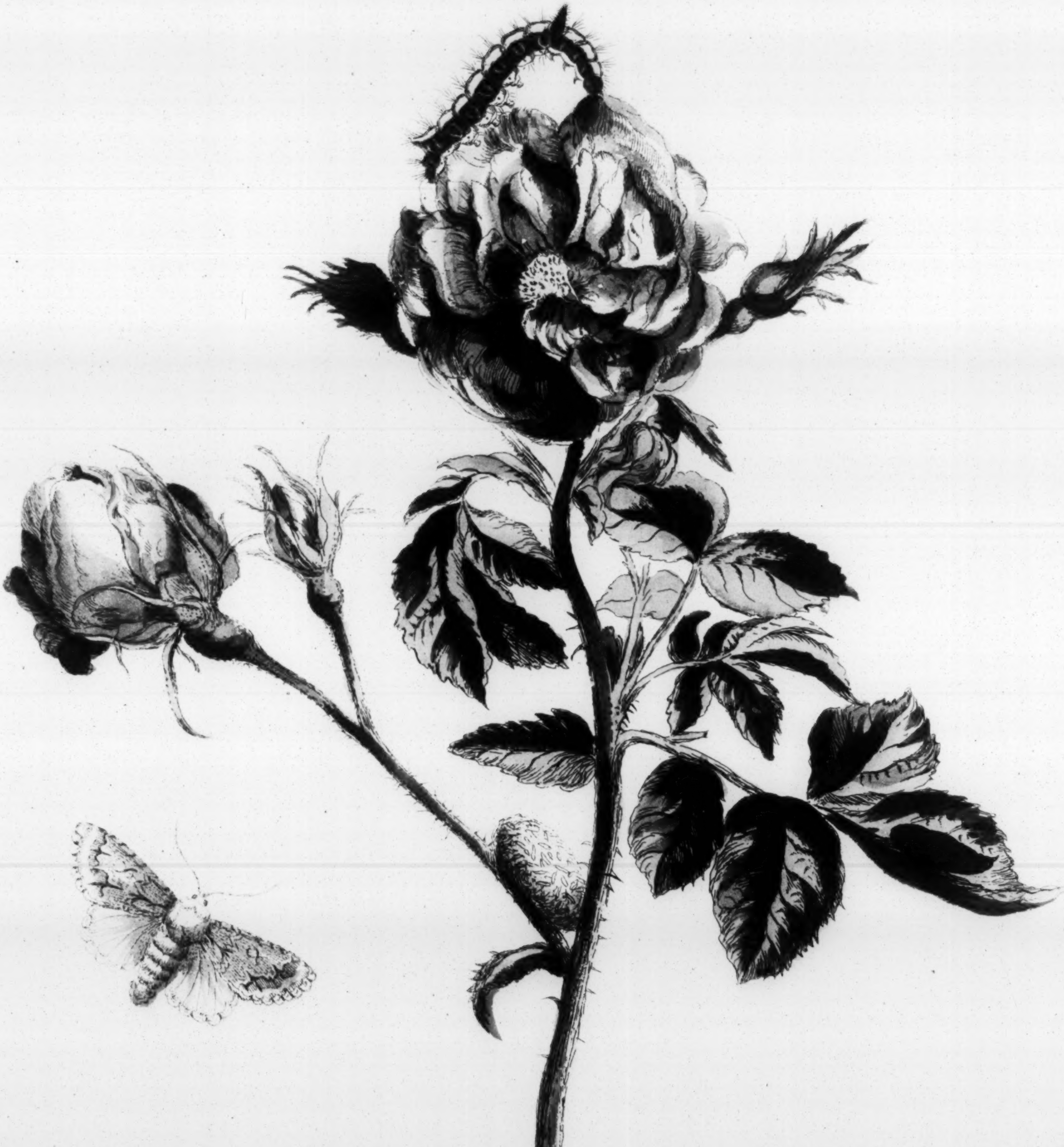
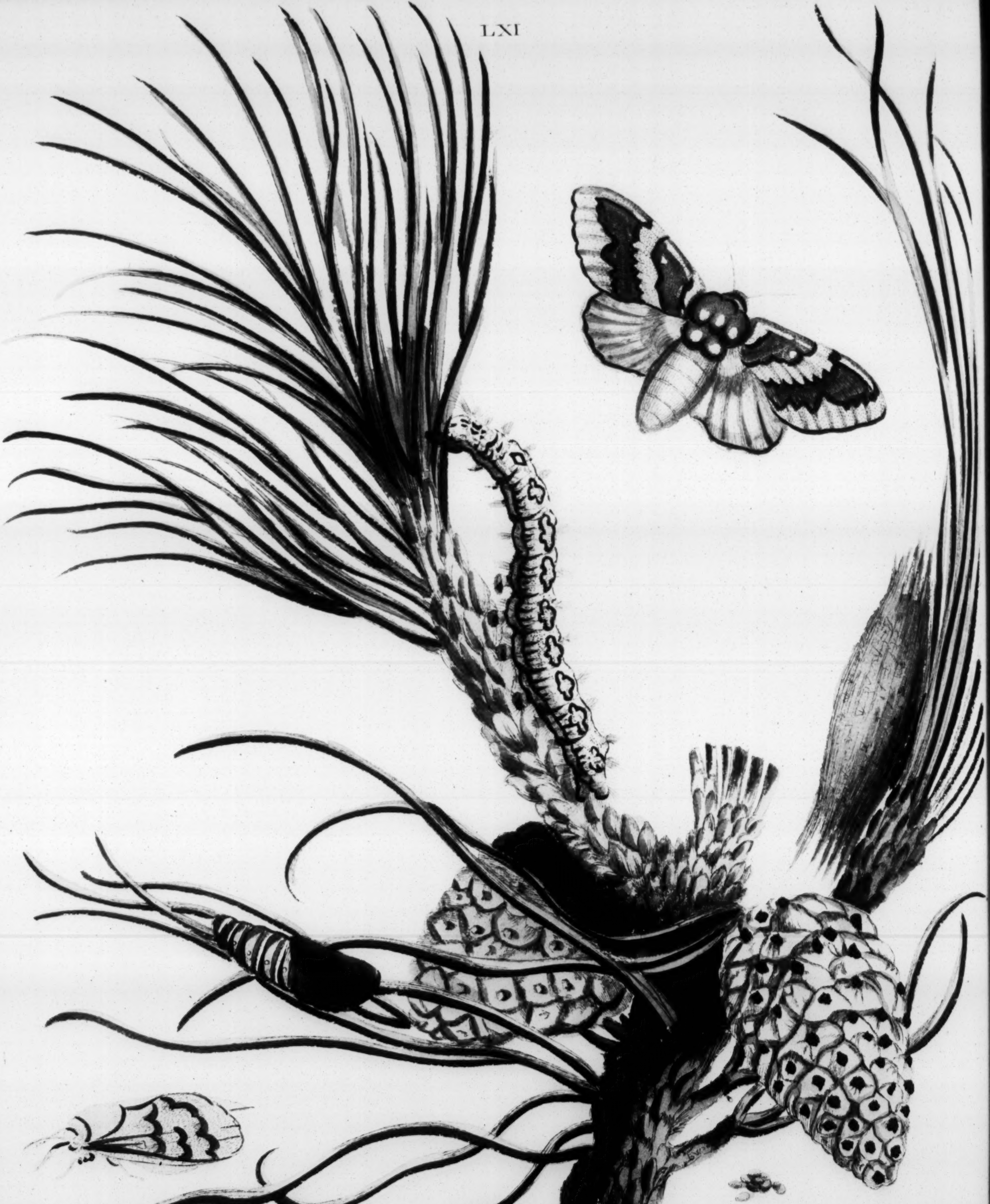


LXI



V.

THE WILD PINE-TREE LAPPIT-MOTH. Mr. *Roſel* informs us, That the *Caterpillars* of this curious Fly ſeed on the *Pinus ſylveſtris*, or Wild Pine: That they are full ſed in the Month of *June*, at which Time they change to *Chryſalis*, within ſuch a Spinning as is repreſented in the Plate; and, aſter lying in that State three Weeks the *Moths* appear.

About the Middle of *September*, 1748, I took one of theſe *Caterpillars* upon a *White Thorn* Buſh, near *Richmond* Park; which is ſtill alive this 20th Day of *January* 1748-9, though it has eat nothing, that I know of, ſince it has been in my Cuſtody. It remains ſtretched out, in the Manner of the *Lappit-Caterpillar* repreſented at the Letter *a* of the firſt Plate of this Section; and I do not think it will begin to ſeed until there are Buds of *Black* or *White Thorn* to give it. This is the only *Caterpillar* of the Kind that I have known taken in *England*. —For the Drawings exhibited in my Plate, I am obliged to Mr. *Roſel*.

See *Roſel*, Cl. 2. Tab. 59.

The Wild Pine-Tree.

Pinus ſylveſtris. C. B. Pin.

SECT. *c.*

CATERPILLARS, *having many* Tufts *of* Hair, *producing* TUSSOCK-MOTHS.

L. 1. CH. 1. I. CL. 3. S. *c.* 1.

THE BLACK TUSSOCK-MOTH. This *Moth* is bred about the Middle of *June*; at which Time it lays Eggs of a light grey Colour, incloſed within a woolly Subſtance; and thus they continue for about one Month. When the infant *Caterpillars* appear, they feed on *Black Thorn*, *White Thorn*, *Bramble*, &c. They live all the Winter in the *Caterpillar* State, and change to a *hairy Chryſalis*, within a Spinning, about the Middle of *May*. The *Caterpillars* may be found, full fed, on *Black Thorn* that grows by the Sides of Woods and Hedges; as for the *Moth*, it is not commonly taken in the Fly-ſtate.

See *Albin*, Pl. 26. *Roſel*, Cl. 2. Tab. 37.

The White double Garden-Roſe.

Roſa Alba hortenſis, flore pleno. I. B. 1144.

L. 1. CH. 1. II. CL. 3. S. *c.* 2.

THE YELLOW TUSSOCK-MOTH. Its *Caterpillar* feeds on the *Red Archangle*, *Oak*, *Haſle*, &c. towards the End of *September*. It makes a Spinning, within which a *hairy Chryſalis* is formed, where it lives till the Middle of *May* following, and then the *Moth* takes its flight; but it is not a very common Fly.

See *Merian*, Vol. 1. Ch. 47. *Albin*, Pl. 26. *Roſel*, Cl. 2. Tab. 38. *Reaumur*, Pl. 33. Pag. 534. Vol. 1.

The Red Archangel.

Lamium rubrum. Ger. 568.

L. 1. CH. 1. III. CL. 3. S. *c.* 3.

THE RED-SPOT TUSSOCK-MOTH. The *Caterpillars* are very common, feeding on moſt *Elm* and *Lime* Trees about Town. They make a Spinning

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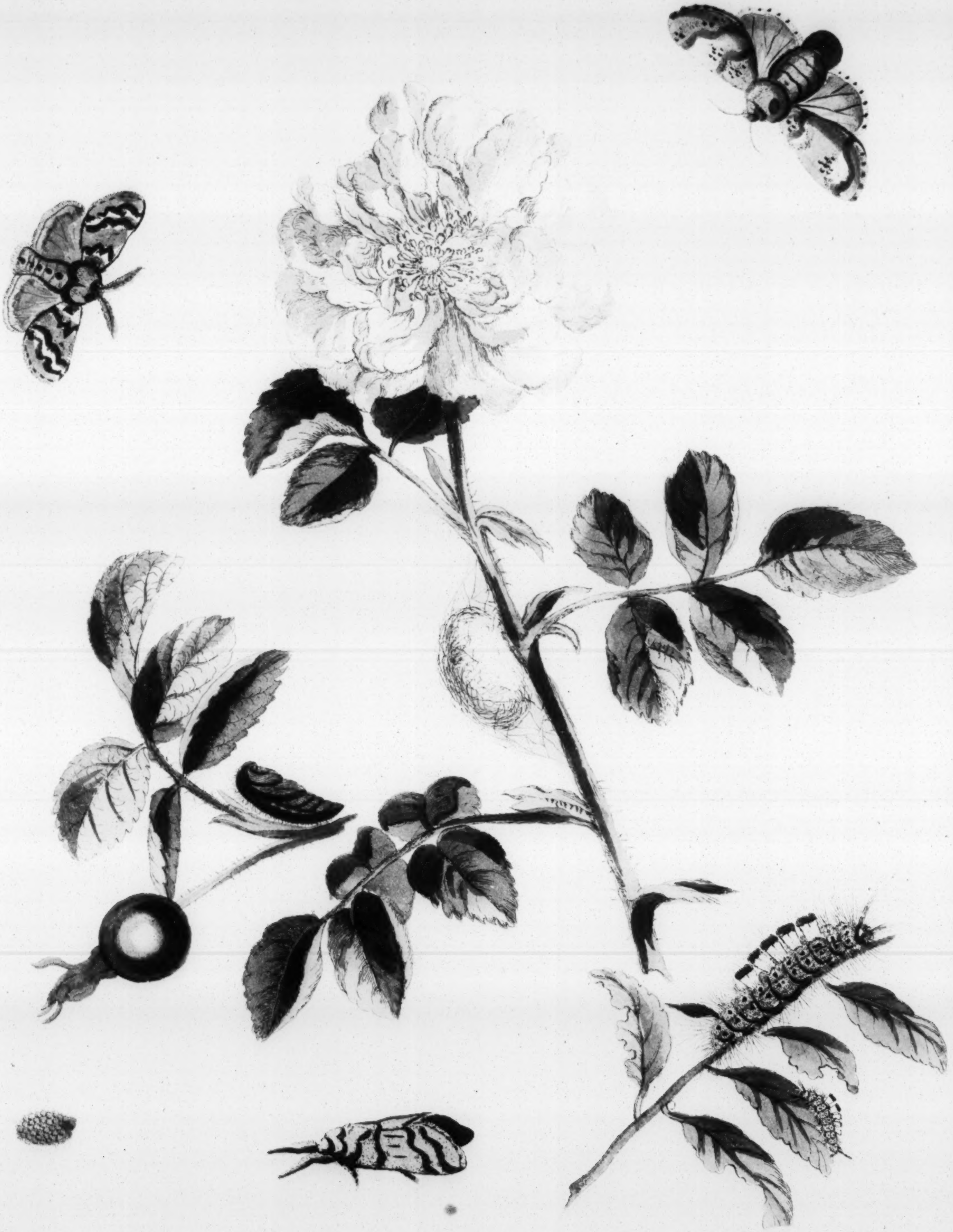

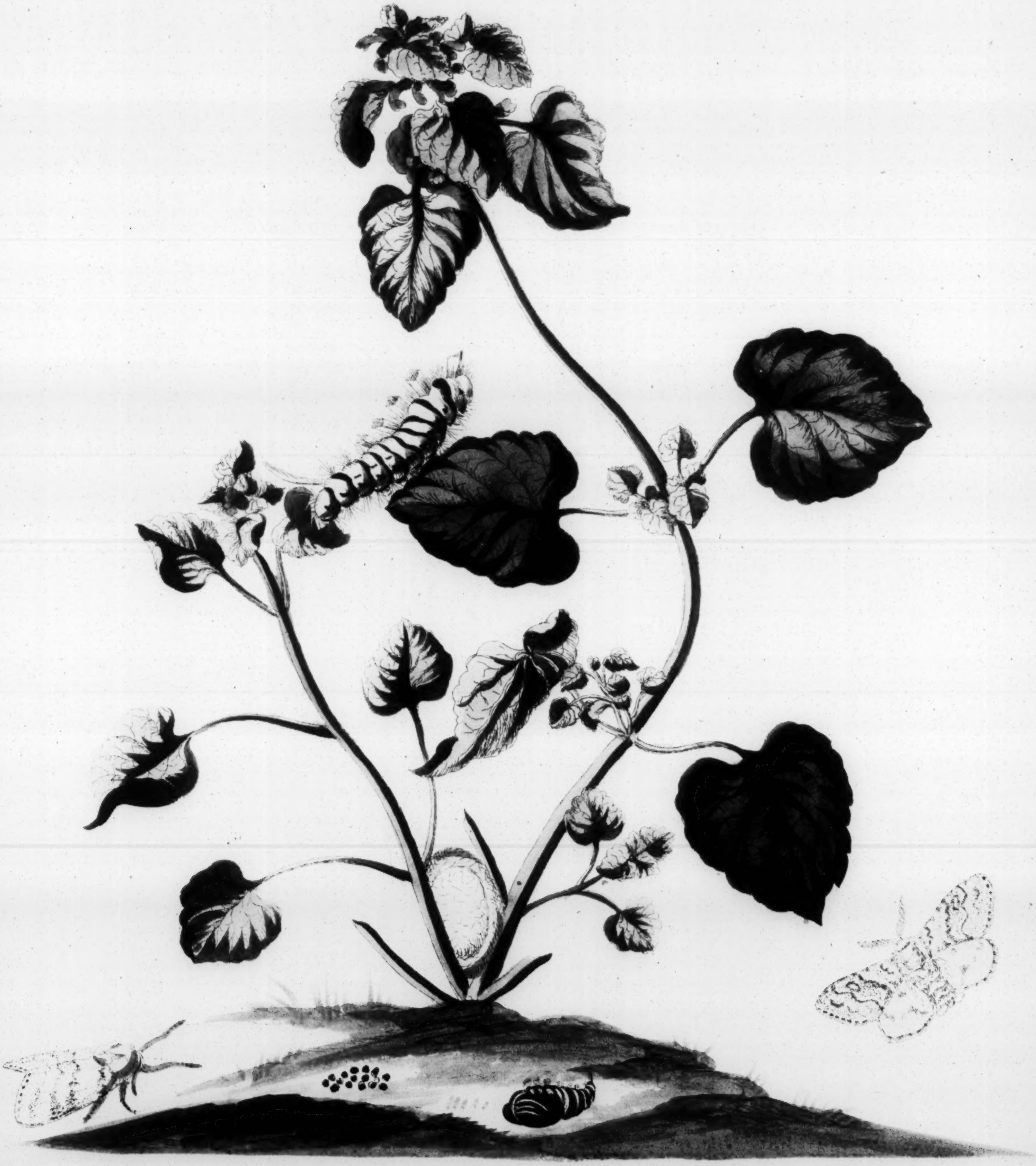

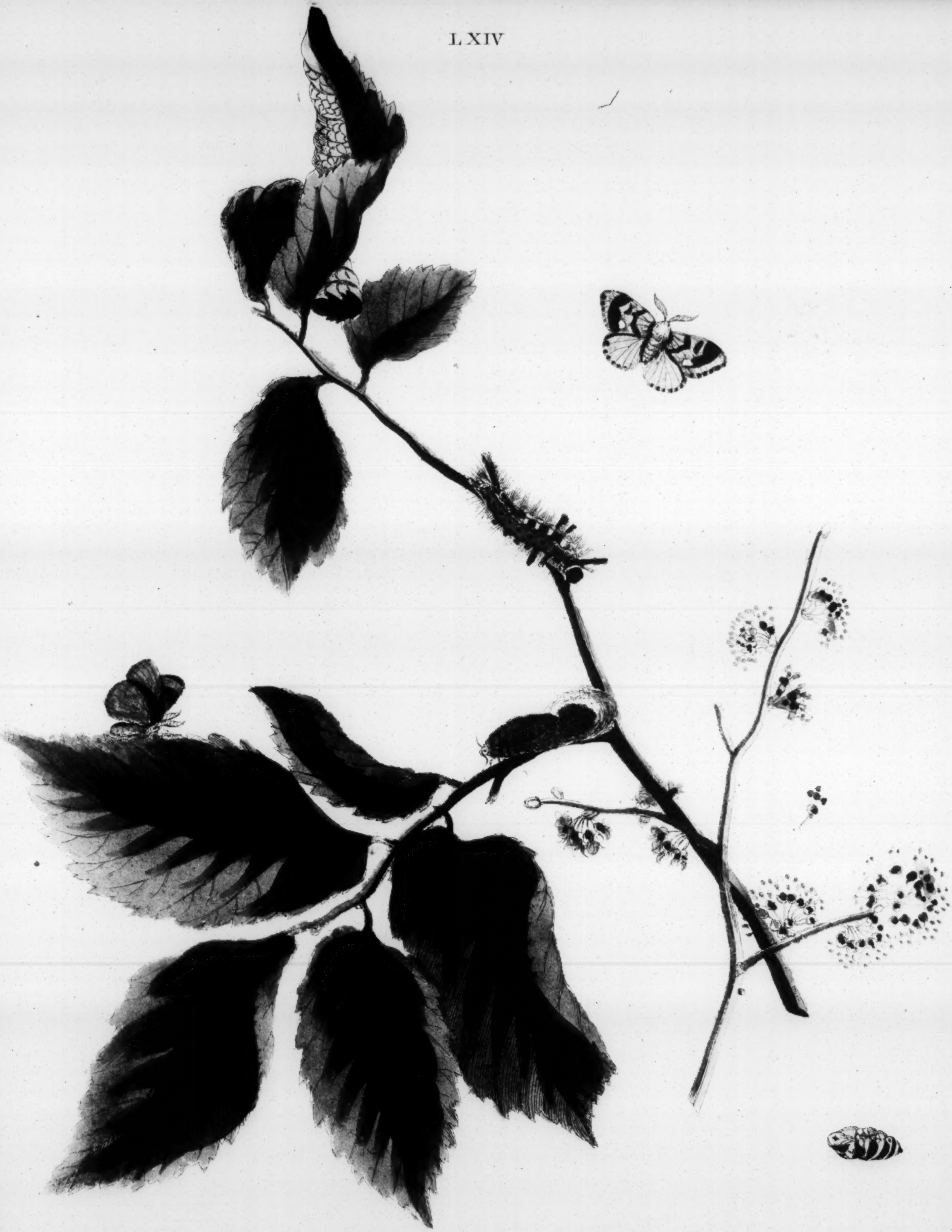

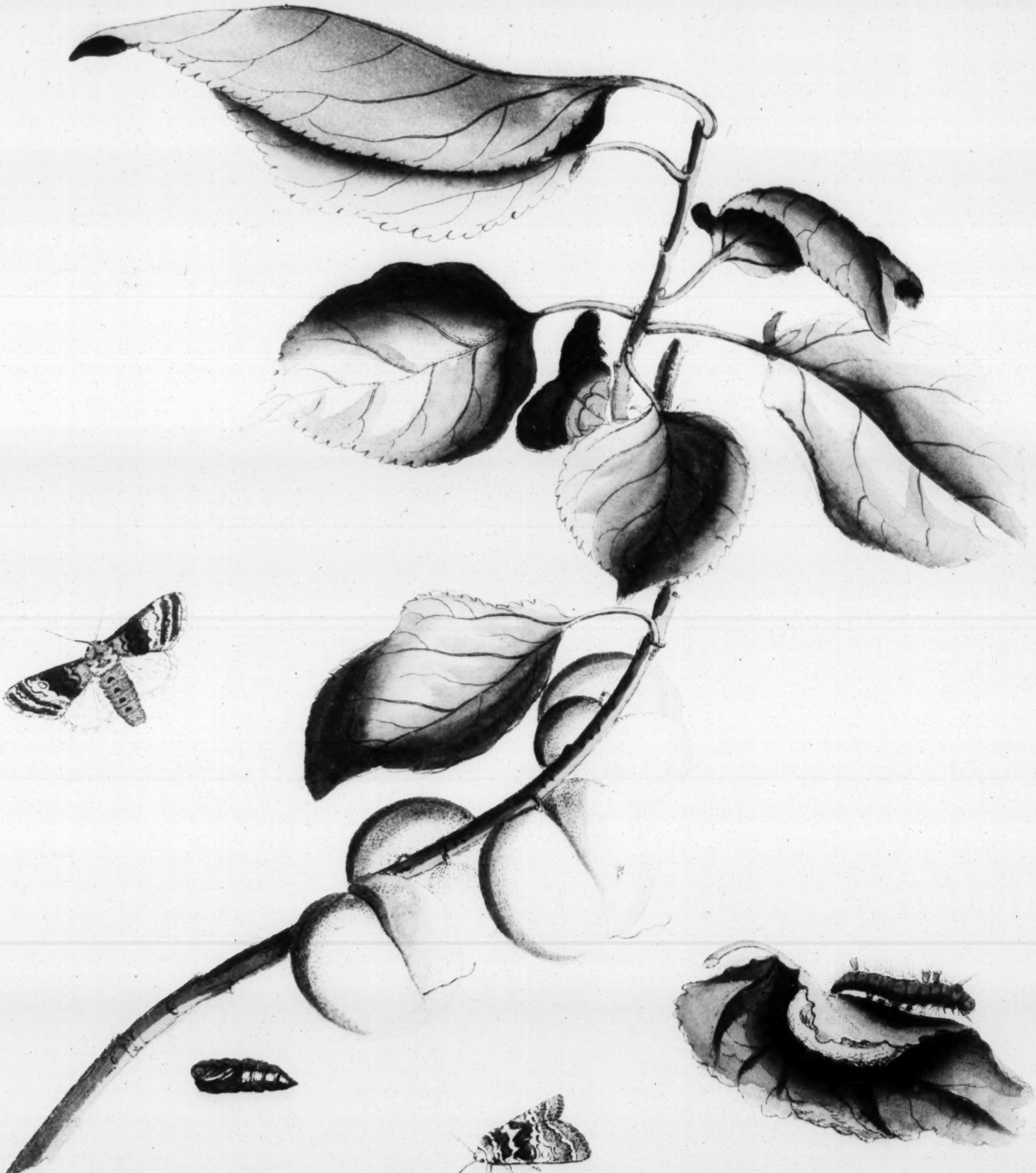

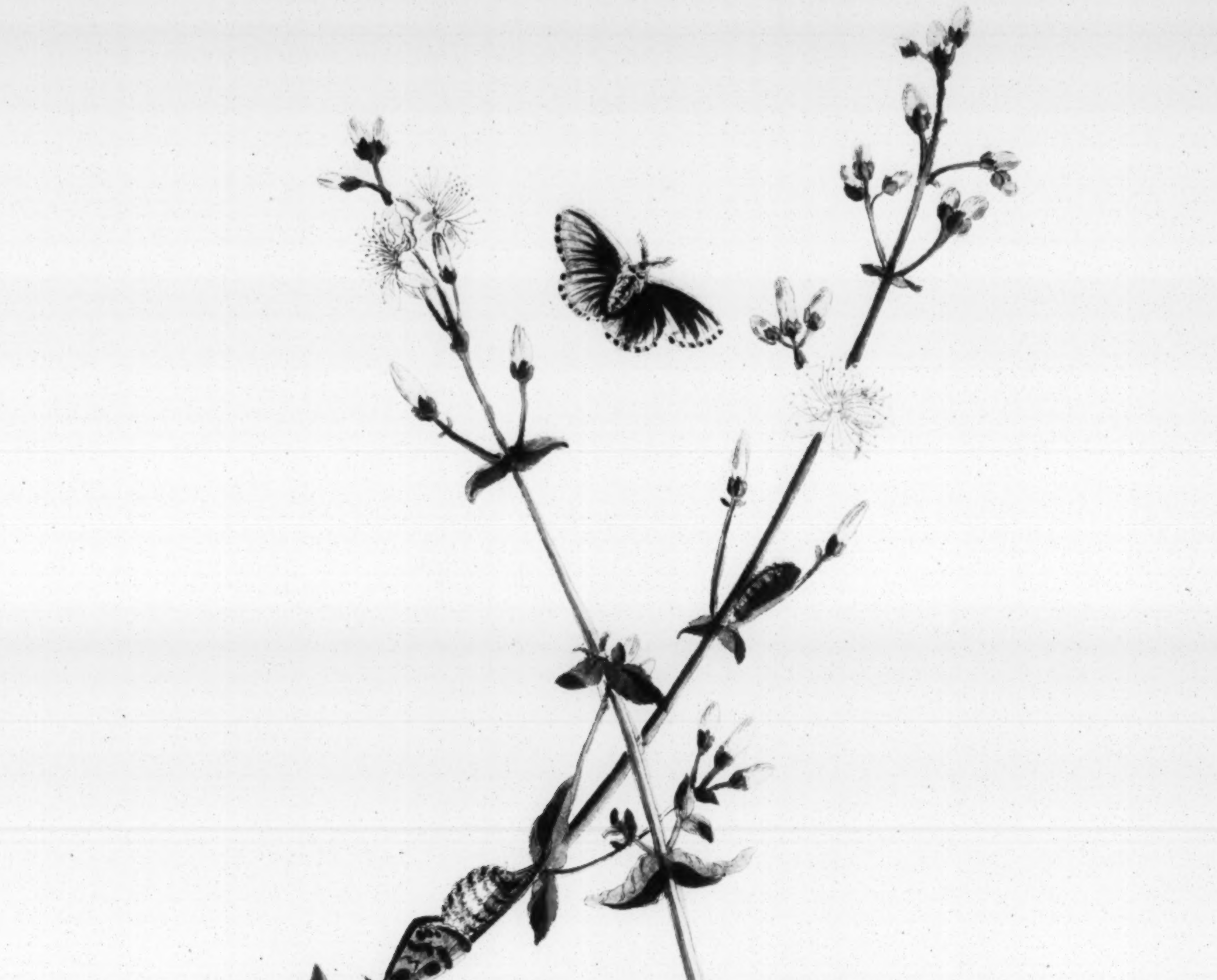
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under the Copings of Walls, Pales, &c. at the End of *May*; and the *Moth* is bred at the End of *June* and in *July*. The Females have no Wings; but, if you carry one or two of them in a Box (where there is a Breed of this *Moth*) the Males will ſollow you in order to get at them: So that, if you put the Box on the Ground, you may eaſily take the Cocks with your Net. Several other *Moths* may be taken by the like Means.

See *Albin*, P. 89. *Reaumur*, Pl. 19. Pag. 342. Vol. 1.

The ſmooth Leaved Elm.

Ulmus folio Glabro. Ger. Em. 1481.

L. 1. Ch. 1. **IV.** Cl. 3. S. c. 4.

THE ORANGE TUSSOCK-MOTH. The Food of its *Caterpillar* is *Haſle*, *St. John's Wort*, *Oak*, &c. About the Middle of *May* it made a Spinning, and changed to a *Chryſalis*, and the *Moth* came forth three Weeks after. It is very ſcarce, and the Female has no Wings. I took one of theſe *Caterpillars*, feeding on *Oak* Leaves, on the 25th of *September* 1748; two Days after, it ſpun up in order to its *Chryſalis* State, and, on the 8th of *October*, the *Moth* was bred: From whence I conclude, this *Moth* breeds twice in a Year.

See *Roſel*, Cl. 2. Tab. 40. *Albin*, P. 90.

The elegant upright St. John's Wort.

Hypericum pulchrum Tragi. I. B. III. 383.

L. 1. Ch. 1. **V.** Cl. 3. S. c. 5.

THE NUT-TREE TUSSOCK-MOTH. The *Caterpillar* of this very ſcarce Fly was fed upon the *Haſle*. About the Middle of *September* it ſpun up, and changed into a *Chryſalis*, and the *Moth* was bred at the Beginning of *April*.

See *Albin*. P. 90. *Roſel*, Cl. 2. Tab. 53.

The Maſculine Apricock.

Armeniaca, fructu minore præcocior. Miller.

L. 1. Ch. 1. VI. Cl. 3. S. c. 6.

THE SYCAMORE TUSSOCK-MOTH. You may find the *Caterpillars* on *Sycamore* Trees, and, towards the End of *Auguſt*, they are uſually full fed; at which Time they ſpin themſelves up, intermixing their Hairs with the Web, and change into the *Chryſalis* State. The *Moths* are bred in *May* and *June*, are not uncommon, and may be found on the Bodies of the Trees in *St. James's Park*, on Pales, Walls, &c.

See *Albin*, P. 83. *Reaumur*, Pl. 34. Pag. 534. Vol. 1.

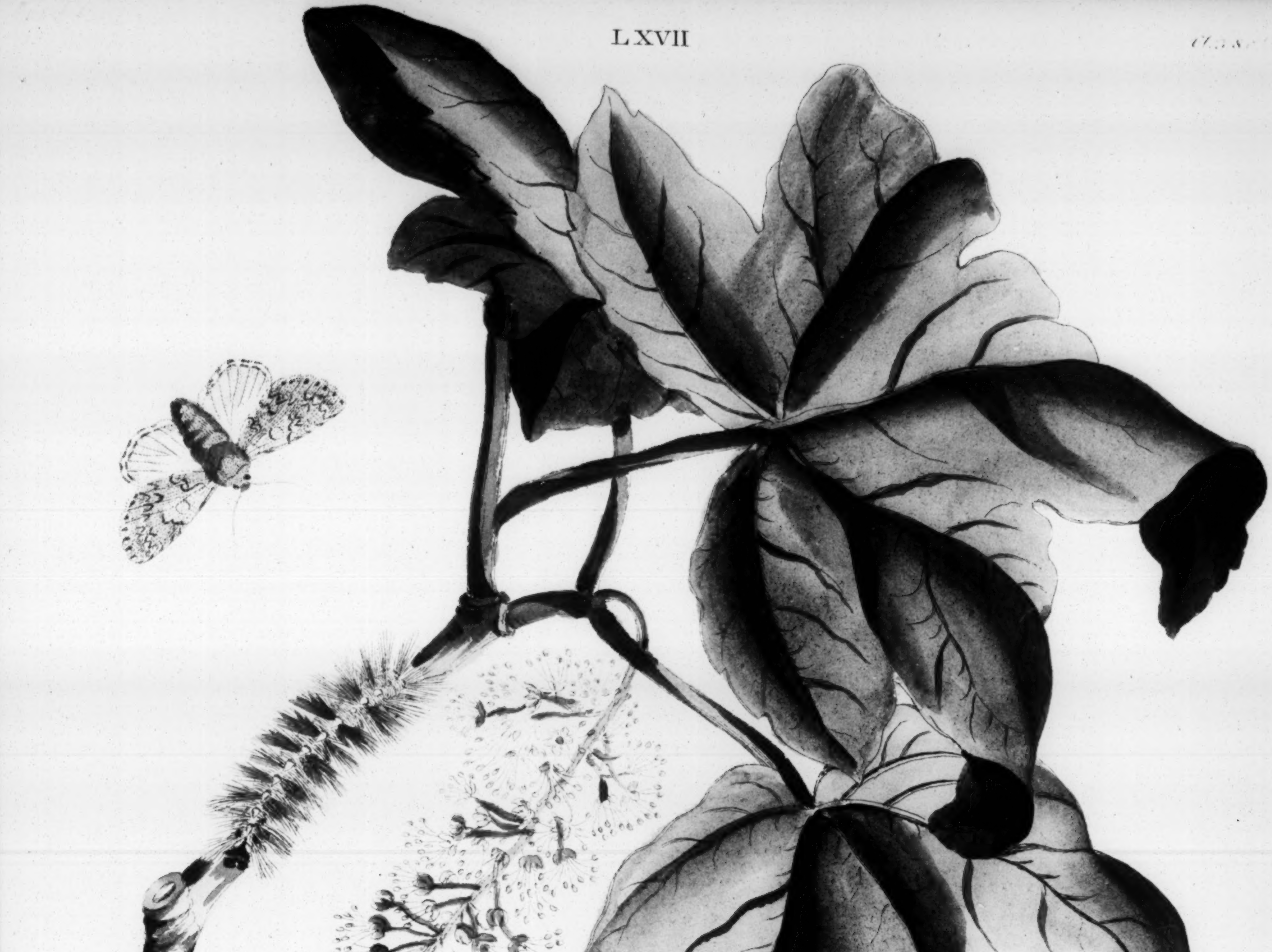
The Sycamore Tree.

Acer majus, multis falſo Platanus. I. B.

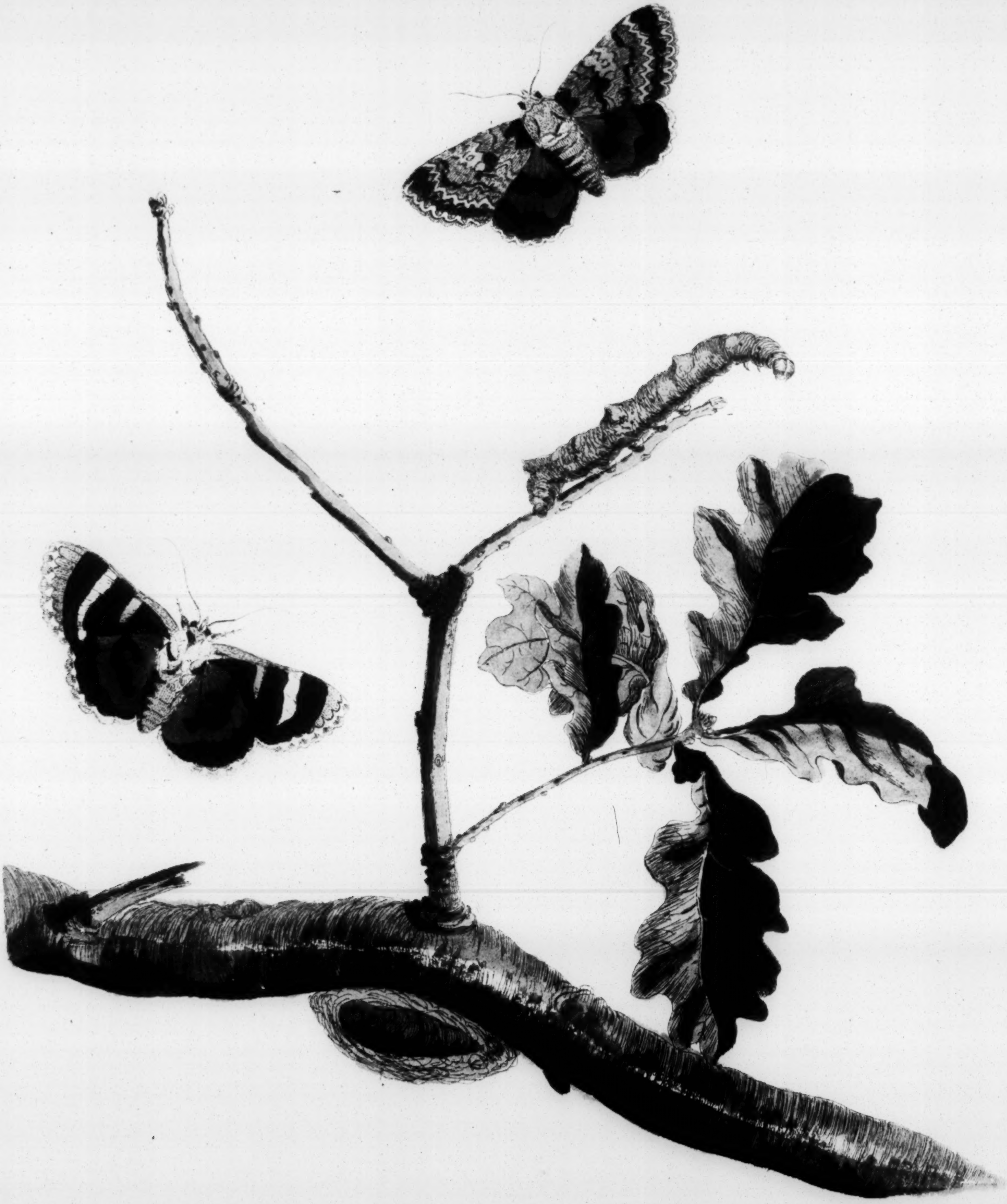
CHAP II.

LXVII

Cl. 3. S.



LXVIII



CHAP. II.

CATERPILLARS that perform their progreſſive Motion after a different Manner, *viz.* by drawing up the Tail towards the Head, whereby their Bodies become bent into the Form of a *half Loop*, on which Account they are called HALF-LOOPERS.

CLASS I.

CATERPILLARS *having* eight Feet, two Holders, *and* ſix Claws *or* Hooks, *and having* Protuberances.

SECT. *a.*

L. I. CH. 2. **I.** CL. I. S. *a.* I.

THE CRIMSON UNDERWING MOTH. The *Caterpillar* of this *Moth* feeds on *Oak-leaves*, and becomes a *Chryſalis*, within ſome of the ſame Leaves ſpun together, at the Beginning of *June*. The *Moth* appears at the Beginning of *July*, and is extremely ſcarce, as is alſo the *Caterpillar*.

The Oak-Tree.

Quercus Latifolia. C. B.

PART III. CLASS II.

CLASS II.

CATERPILLARS *which are* hairy, *having two* Holders, four Feet, *and* ſix Hooks *or* Claws.

SECT. *a.*

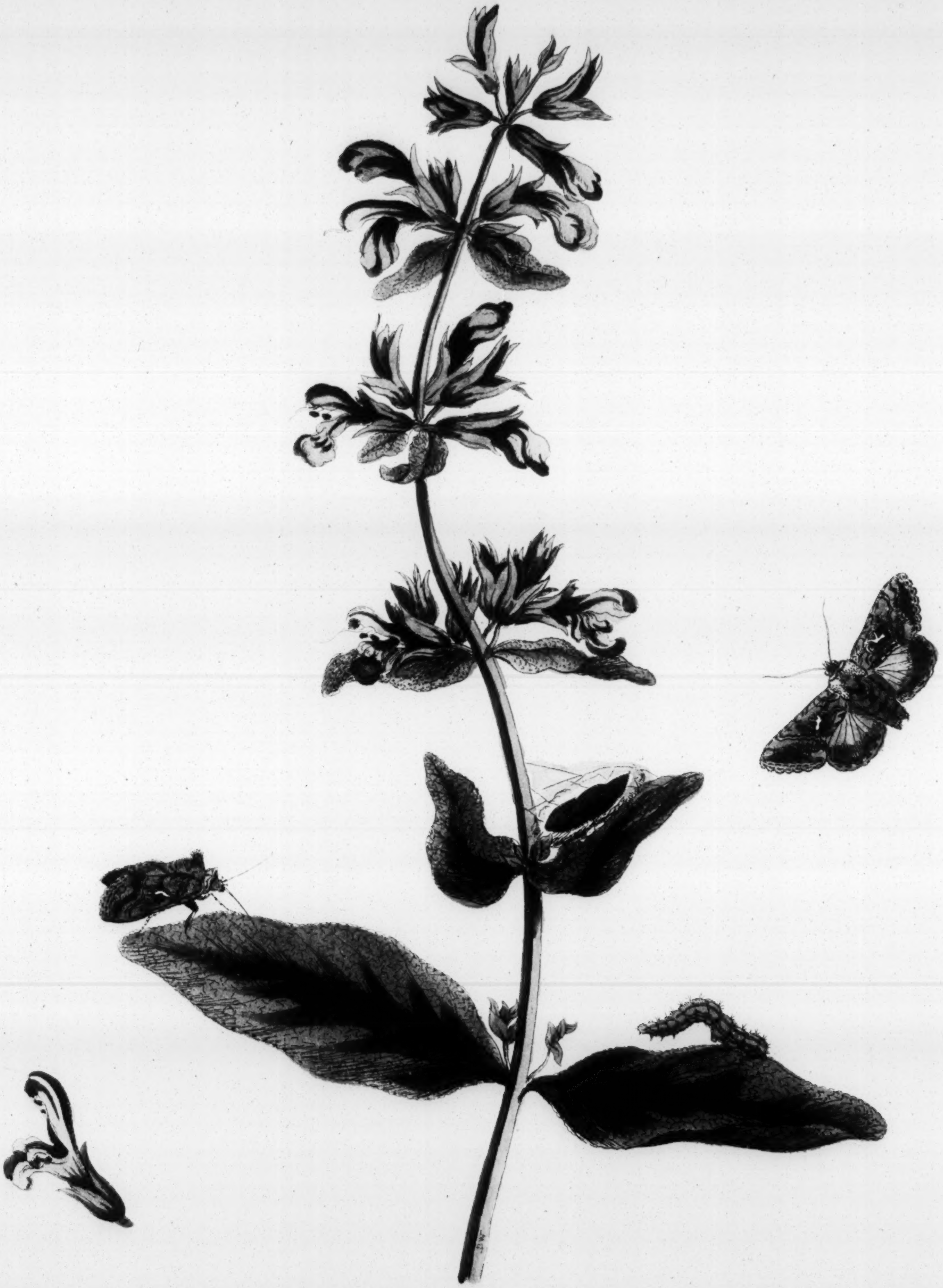
L. 1. CH. 2. I. CL. 2. S. *a.* 1.

THE SILVER *Y* MOTH. The *Caterpillar* feeds on *Sage*, *Clover*, *Burdock*, *&c.* changes to a *Chryſalis*, within a ſlight Spinning, in *Auguſt*, and the *Moth* is bred in *September*; is very common in moſt Fields and Gardens, and flies in the Day as well as at Night. There is an early Breed of this *Moth* in *May*.

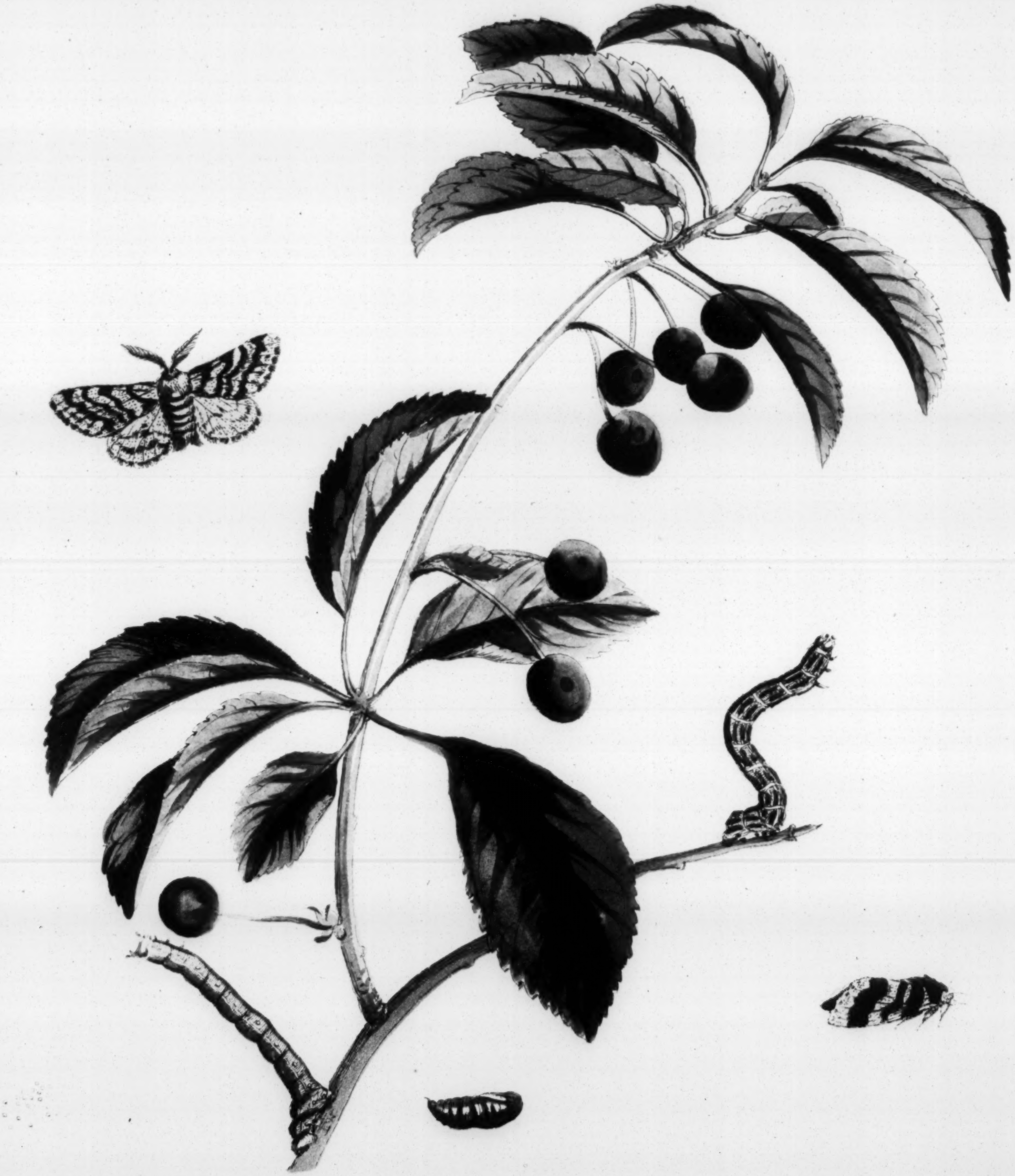
See *Roſel*, Cl. 2. Tab. 5. *Albin*, P. 79. *Liſter* on *Godart*. P. 20. N. 14. *Reaumur*, Pl. 19. Pag. 342. Vol. 1. Pl. 26. P. 348. Vol. 2.

Common Sage in Flower.

Salvia hortenſis. I. B.



LXX



CHAP III.

THE *Caterpillars* of this Chapter have two Feet and two Holders, with ſix Hooks or Claws; but have no Feet in the Middle Part of their Bodies like thoſe already deſcribed. Their progreſſive Motion is performed by fixing the Head-part, and drawing up the Tail to it; ſo that each Step, forming a Loop, they are called LOOPERS. They are provided with ſtrong and ſharp Claws in their Holders, by which they can faſten themſelves in ſuch manner as to ſupport the Reſt of their Bodies, either perpendicularly or horizontally, or in any other Poſture they pleaſe, without any regard to the Center of Gravity in their reſpective Bodies. They are able likewiſe, out of their own *Viſcera* or Bowels, to furniſh themſelves with Lines, whereby they can let themſelves down from the Branches of Trees, or other Heights, as they find Occaſion.

CLASS I.

Smooth *or* naked Loopers.

SECT. a.

Having no Protuberances.

L. 1. CH. 3. I. CL. 1. S. a. 1.

THE BRINDLED BEAUTY MOTH. The *Caterpillar* will feed on moſt Fruit-trees, as alſo on the *Willow*, &c. Its *Chryſalis* is formed within the Earth towards the End of *June*, and the *Moth* comes forth in *April*. I have taken Plenty of them ſticking on the Barks of the *Willow* Trees about the Water-works at *Chelſea*.

See *Merian*, Vol. 1. P. 75. Chap. 37. *Albin*, Pl. 39.

The Honey-Cherry.

Ceraſus, ſylveſtris, ſeptentrionalis, fructu rubro parvo ſerotino. Raii. Syn.

II.

L. 1. Ch. 3. II. Cl. 1. S. a. 2.

THE JULY ARRACH-MOTH. The *Caterpillar* may be found, full fed, on the *wild Arrach*, about the Middle of *September*; at which Time it changes to a *Chryſalis* in the Earth: The *Moth* is bred in *July*, and may be taken in an Evening in and near the Gardens about *Vauxhall* and other Places.

See *Albin*, Pl. 47.

The Black Curran-Tree.

Ribes nigrum vulgo dictum, folio olente. I. B.

L. 1. Ch. 3. III. Cl. 1. S. a. 3.

THE MOTTLED UMBER-MOTH. The *Caterpillar* feeds on Fruit-Trees, *Oak*, *Elm*, *Black-Thorn*, *&c.* and turns to a *Chryſalis*, within the Earth, about the Middle of *May*. The *Moth* comes forth in *October*, and may be found at that Time ſticking on the Bark of Trees in Parks, *&c.*

See *Albin*, P. 100.

The Apricock-Plumb.

Prunus fructu parvo præcoci. Tourn.

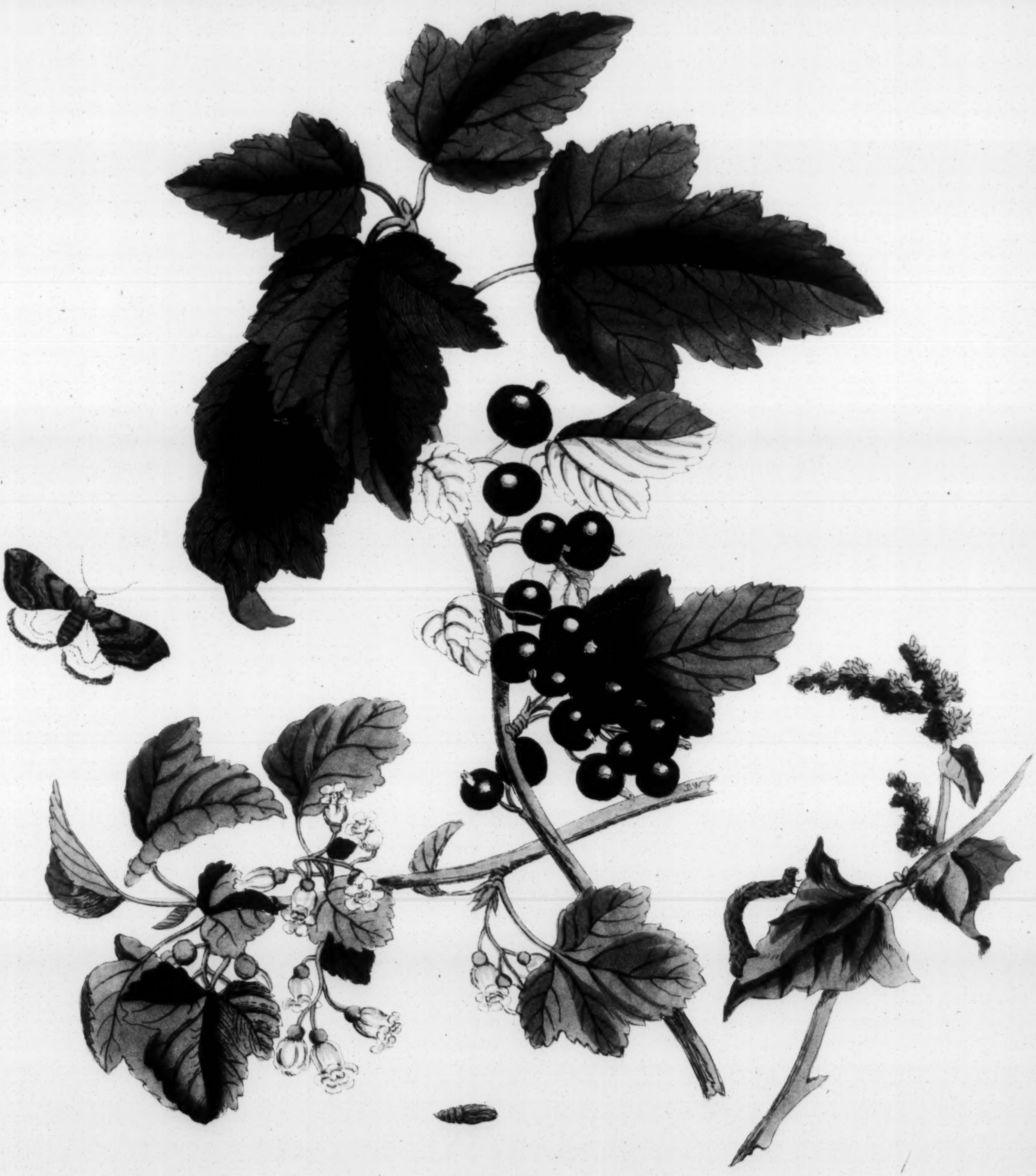
L. 1. Ch. 3. IV. Cl. 1. S. a. 4.

THE JULY SALLOW MOTH. The *Caterpillar* feeds on the common *Sallow*, in the Top-leaves of which (ſpun together) it lies concealed in the Day-time. Some Leaves, thus ſpun together, looked as if they had been dead; but, on Examination, *Caterpillars* of this Sort were found therein: They changed to a *Chryſalis*, ſpun amongſt the Leaves, at the End of *May*. The *Moth* is bred at the Beginning of *July*, and may be taken, in the Evening, by the Sides of Woods, Hedges, *&c.*

The Wild Black Cherry.

Ceraſus major ac ſylveſtris, fructu ſubdulci nigro colore inficiente. C. B. Pin.

LXXI



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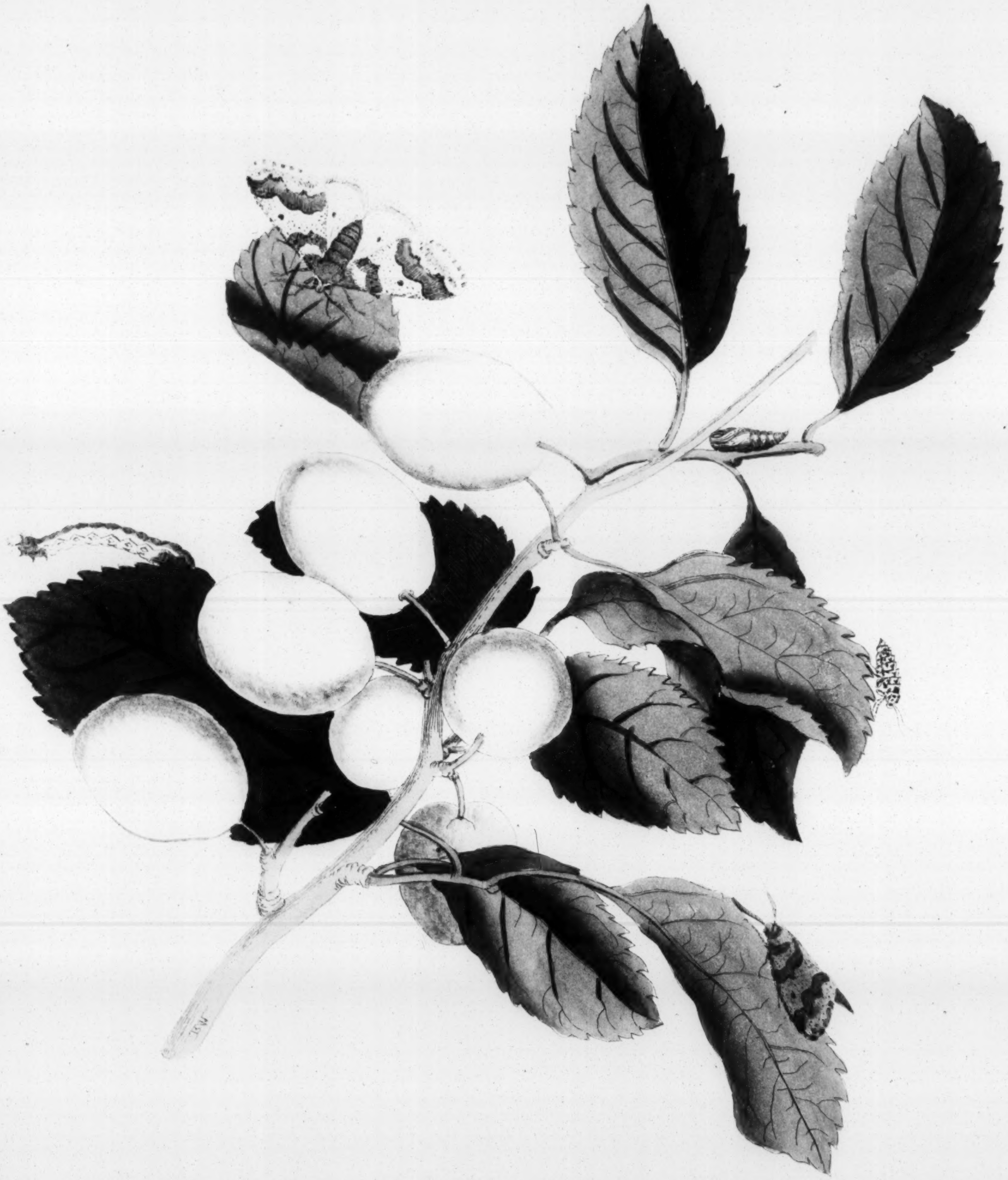

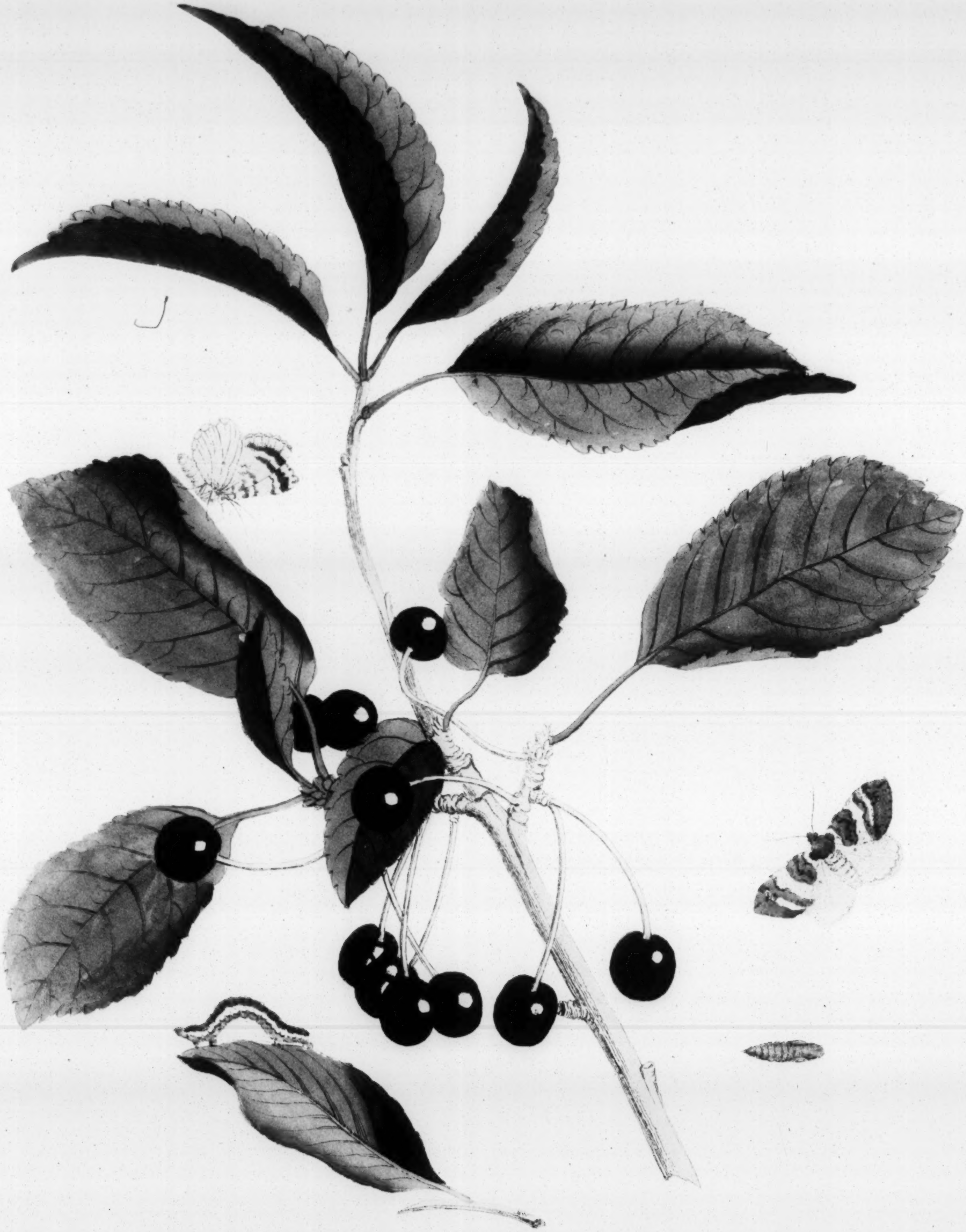

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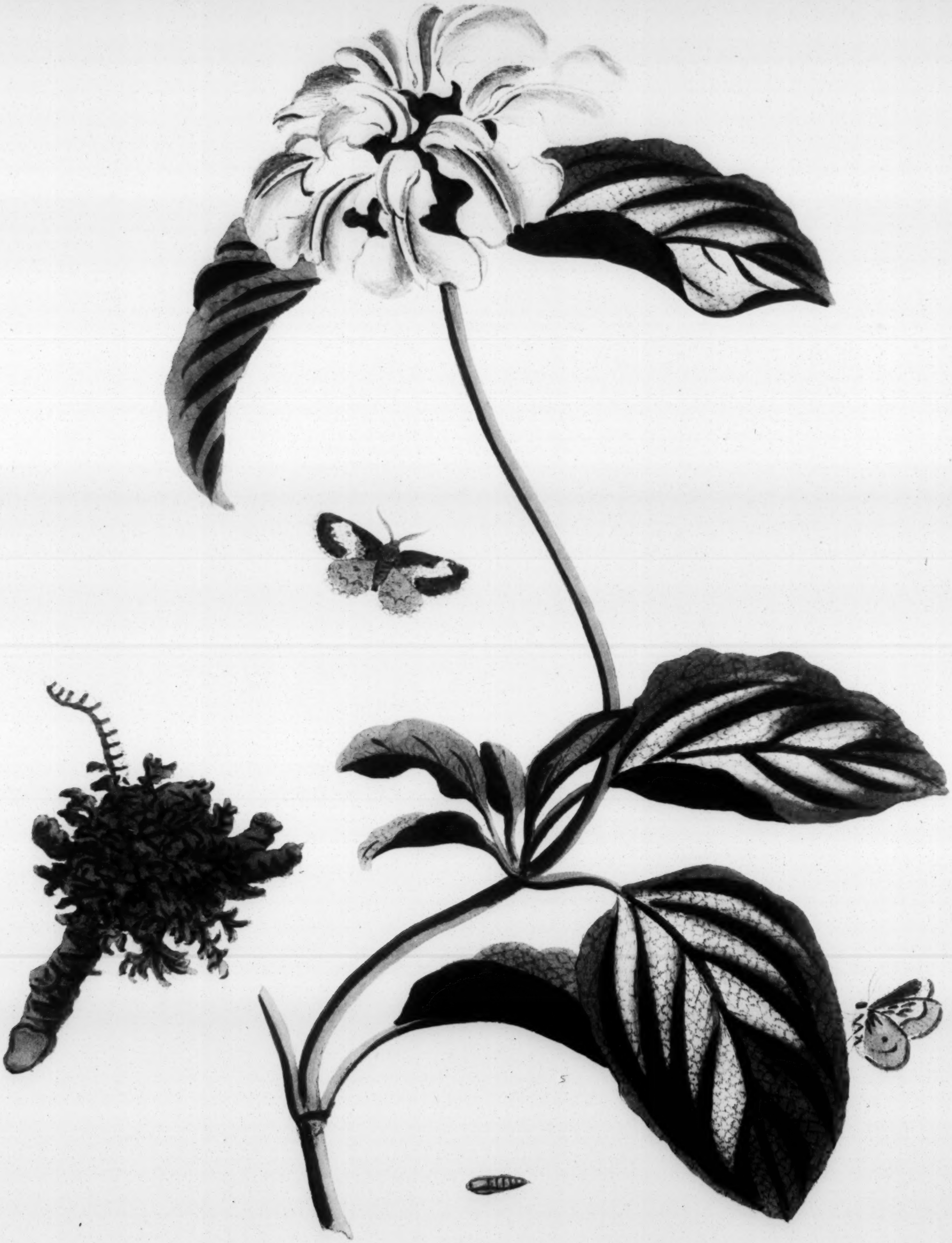

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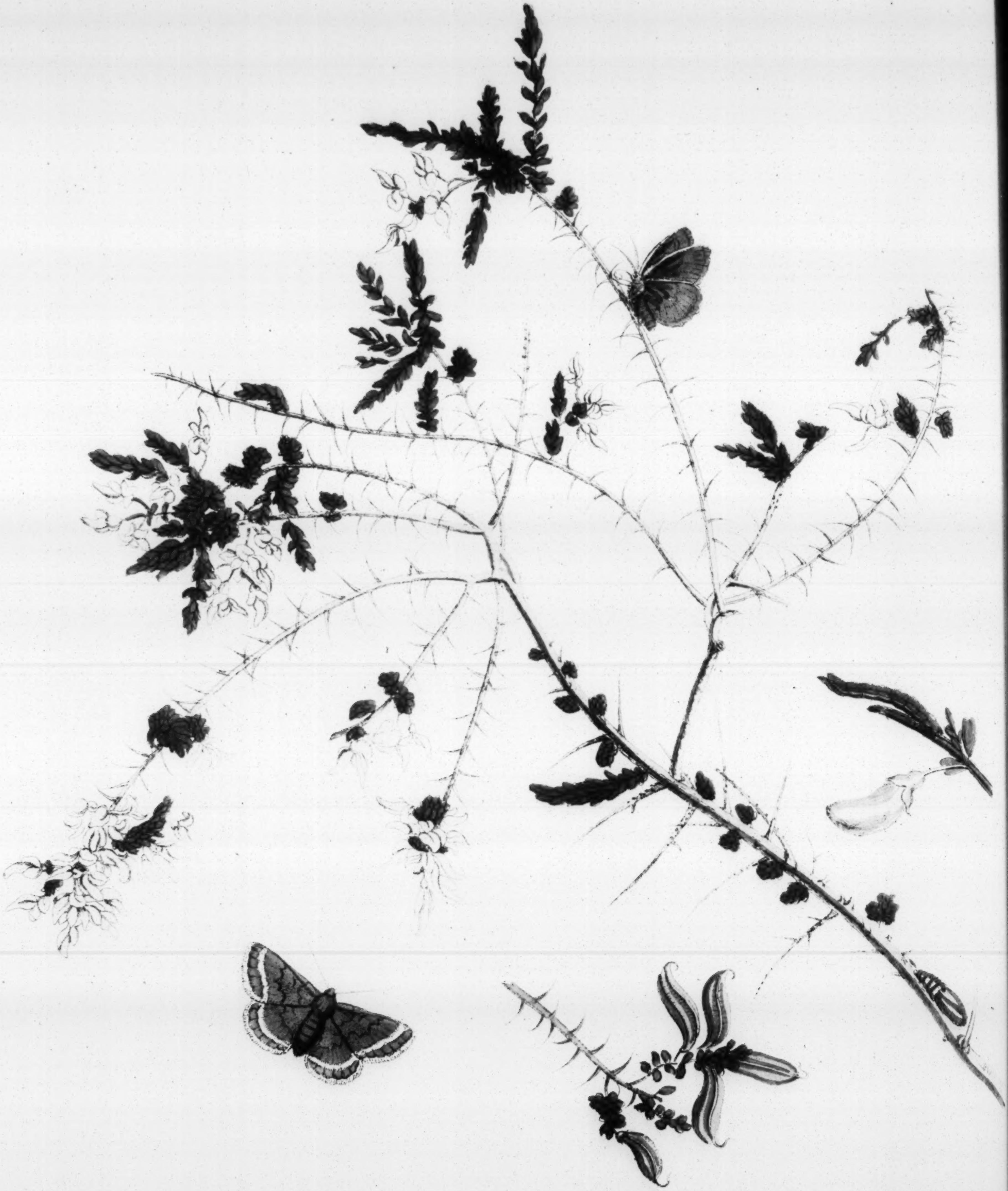

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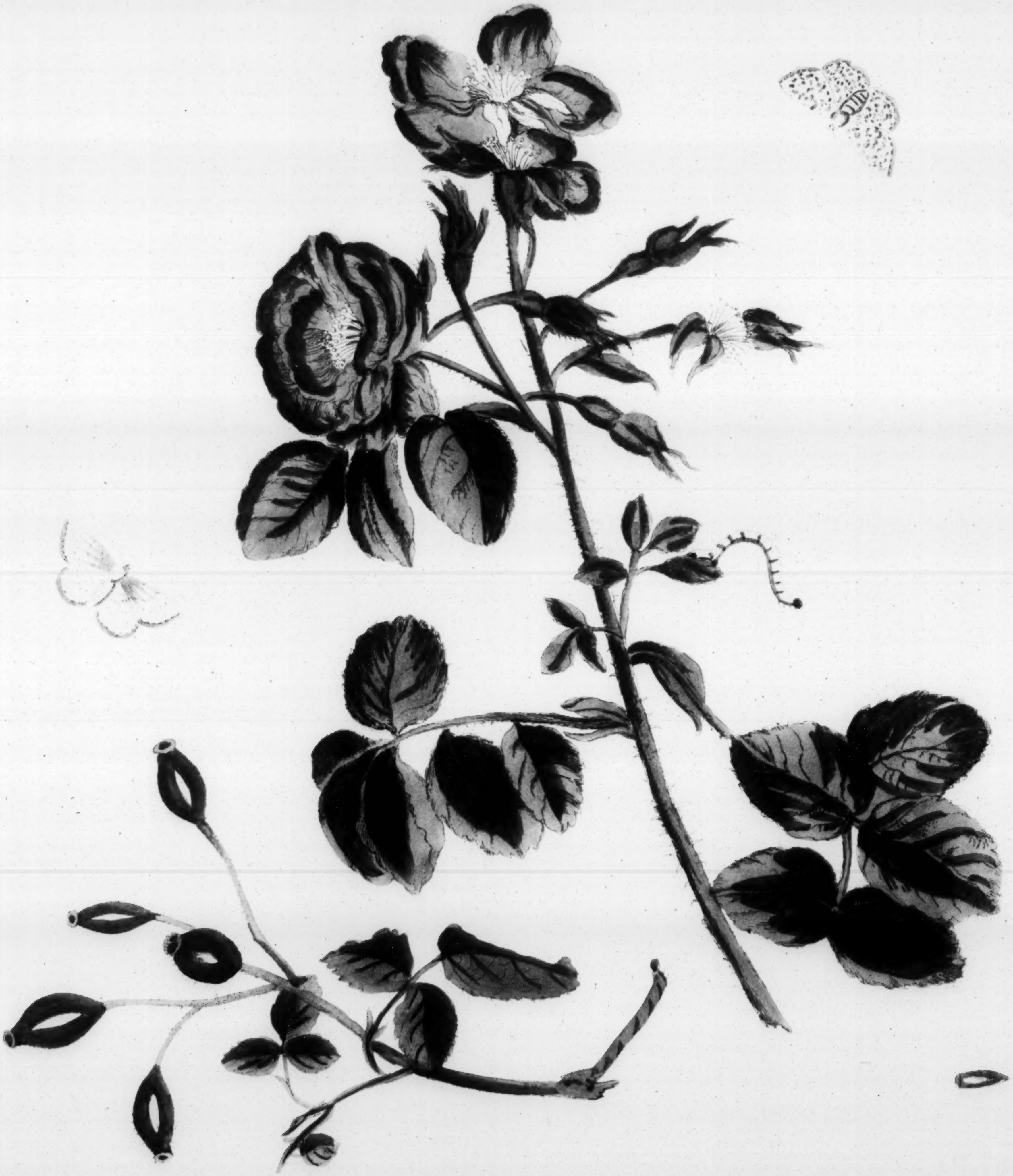


L. 1. Ch. 3. V. Cl. 1. S. a. 5.

THE BUFF ARGUS-MOTH. The two *Caterpillars* exhibited in this Plate were taken by me upon the *Oak*, they feed likewiſe on the *wild Briar*, *White-Thorn*, *&c.* They tied themſelves up againſt the Leaves, after the Manner of the *White Butterfly*, with their Heads upwards; changed into *Chryſalis* about the Middle of *June*, and the *Moths* were bred about the Middle of *July*. Theſe I ſuppoſe to be Male and Female of the ſame Species. You may take them flying, in an Evening, by the Sides of Woods and Hedges, and in green Lanes.

The double-flowered Sweet Briar.

Roſa ſylveſtris odora, ſive eglanteria, flore duplice. Park. Parad.

L. 1. Ch. 3. VI. Cl. 1. S. a. 6.

THE GREEN BROOM-MOTH. The *Caterpillar* ſeeds on the Leaves of the common *Broom*; and, about the Middle of *June*, changes to a *Chryſalis* in a thin Spinning; in which State it continues for about three Weeks, then the *Moth* appears, and may be taken in the Day-time, by beating the *Furze* and *Broom*, wherein they uſually are found. See *Roſel*, Cl. 3. Tab. 12.

The Needle Furze.

Geniſta minor Aſpalathoides, vel Geniſta ſpinoſa Anglica. C. B. Pin.

L. 1. Ch. 3. VII. Cl. 1 S. a. 7.

THE LIME MOSS MOTH. The Eggs are of a greeniſh Colour, and are laid in *June*; after being in that State about ten Days the *Caterpillars* are hatch'd. They feed on the *Moſs* that grows on *Lime* Trees; live and feed all the Winter in the *Caterpillar* State, and about the Beginning of *May*, are full grown, at which Time they make a Spinning amongſt the *Moſs*, and change to *Chryſalis*. The *Moths* are bred at the Beginning of *June*, and may be taken in the Evenings, by the Sides of Woods, in green Lanes, *&c.*

The Yellow-flowered Sage.

Phlomis fructicoſa, Salviæ folio latiore & rotundiore. Raii Hiſt. 511.

Sect. *b.*

SECT. *b*.

Naked Loopers, *with* Protuberances.

L. I. CH. 3. I. CL. I. S. *b*. I.

THE SPOTTED ELM-MOTH. Its *Caterpillar* is not very common, altho' it ſeeds on the Leaves of the *Elm*, *Lime* and *Oak*. It goes into the Earth, and turns to a *Chryſalis* in *Auguſt* : The *Moth* appears in *May*, and is then to be found ſometimes, ſticking on the Barks of the above Trees; but it is not common.

See *Albin*, P. 40, 41. 91, 92.

The Witch Elm.

Ulmus folio latiſſimo ſcabro. Ger. Em. 1481.

L. I. CH. 3. II. CL. I. S. *b*. 2.

THE SWALLOW-TAIL MOTH. The *Caterpillar* ſeeds on *Bramble*, *Oak* Leaves, and other Growths ; lives all the Winter : When it changes to a *Chryſalis*, which it does in *March*, the *Chryſalis* is faſtened by the Tail, and lies, with its Head upwards, within a few fine Threads of its own ſpinning. The *Moth* is bred in *May* and *June*, and may be taken flying in an Evening by the Sides of Woods, and in green Lanes.

See *Roſel*, Cl. 3. Tab. 6. *Albin*, P. 94.

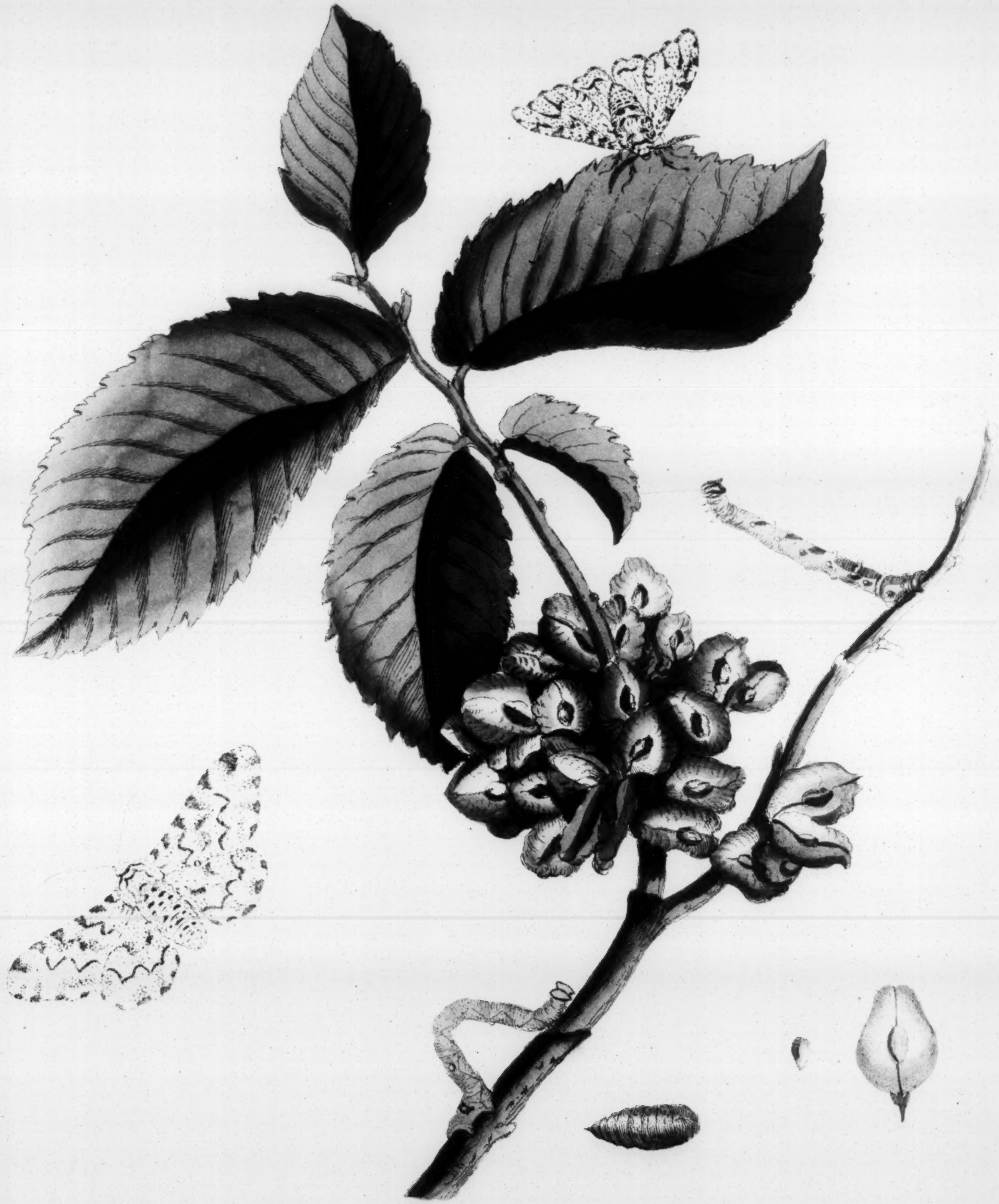
The Bramble.

Rubus, fructu nigro. C. B.

L. I. CH. 3. III. CL. I. S. *b*. 3.

THE OCTOBER-MOTH. Its *Caterpillar* is to be found, full ſed, at the End of *May*, by beating the Boughs of the *Oak*, *Elm*, *Black-Thorn*, &c. which are the Food it ſeeds upon. It changes to the *Chryſalis* State, within the Earth, about that Time,

LXXVII



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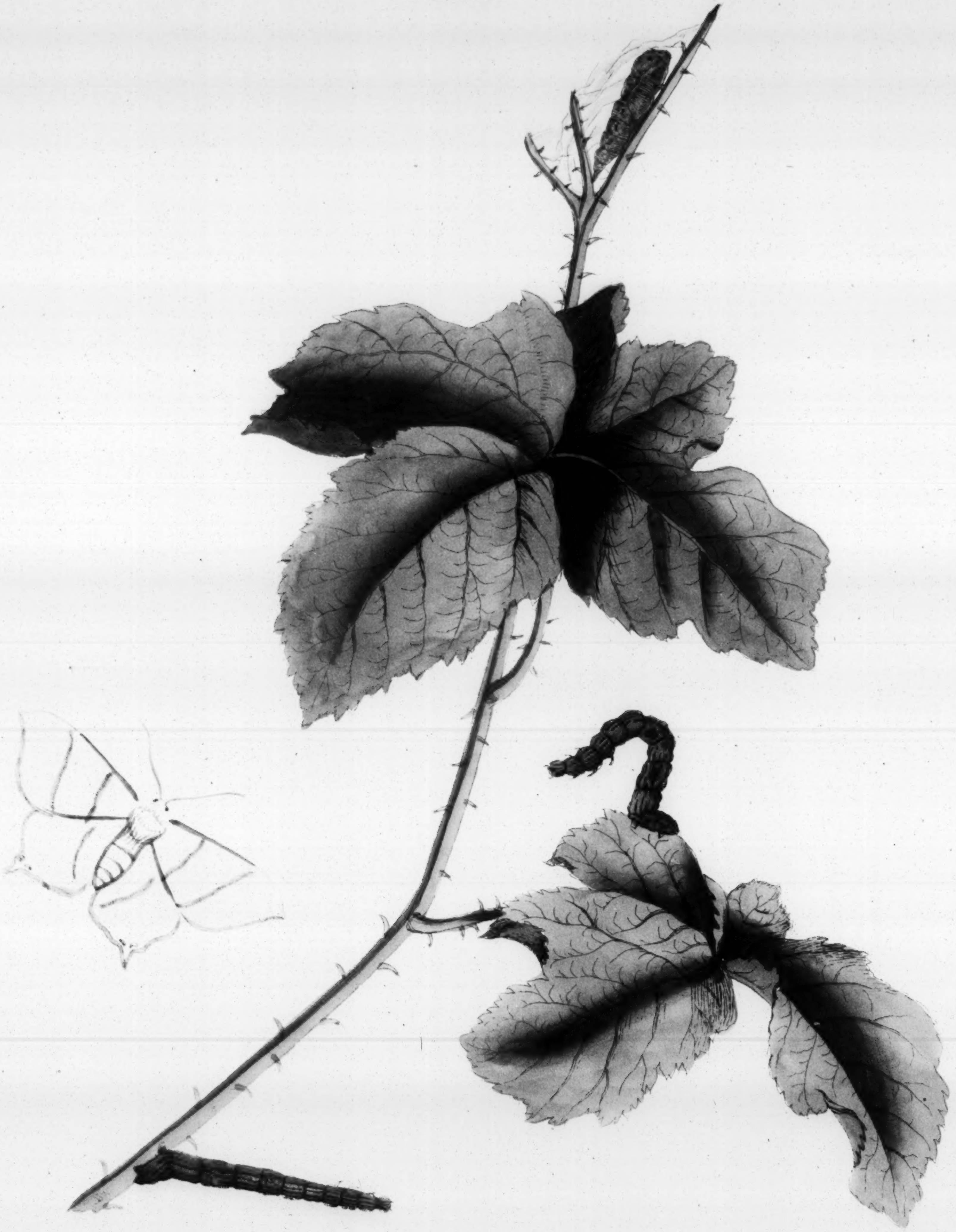

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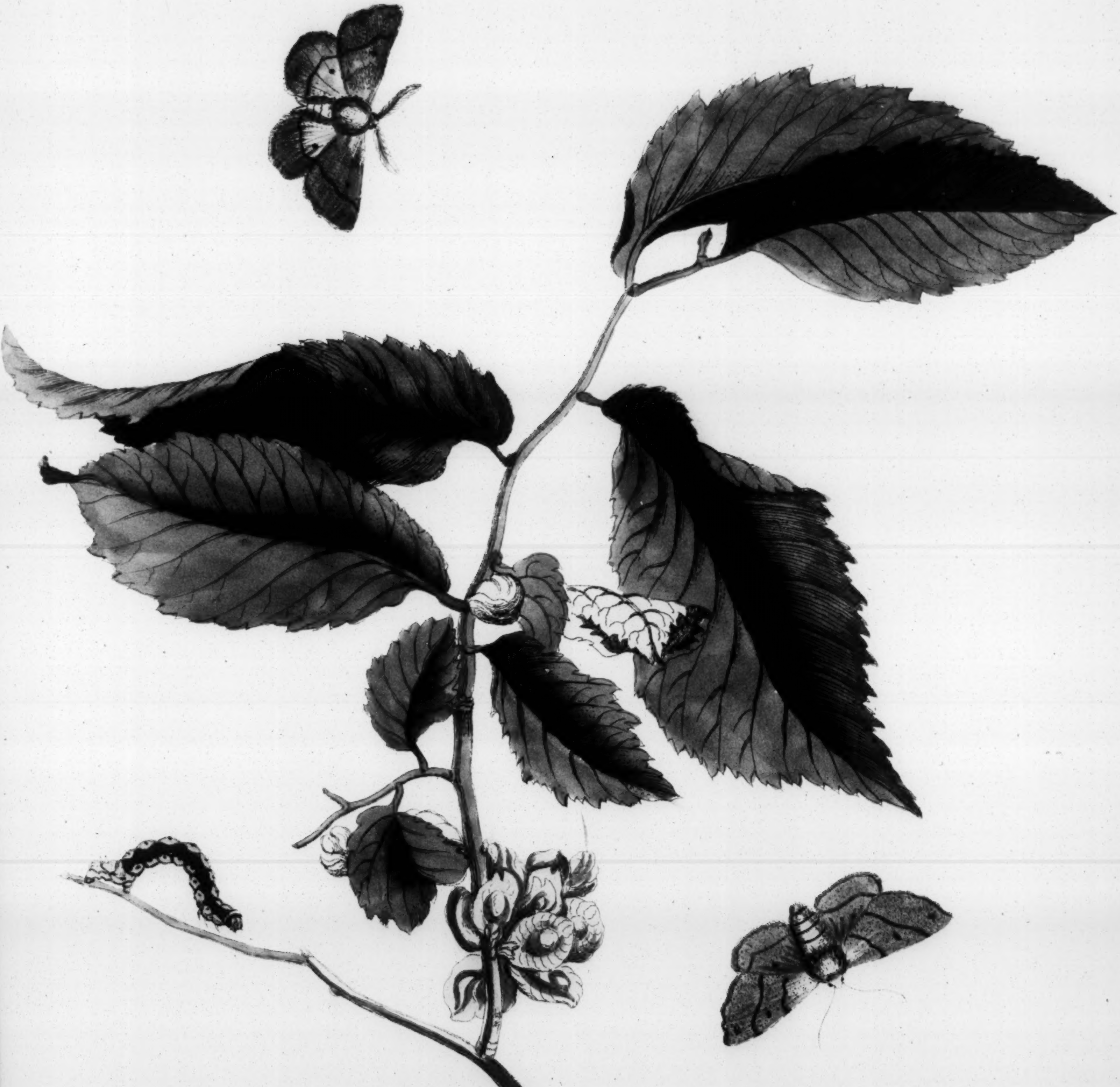
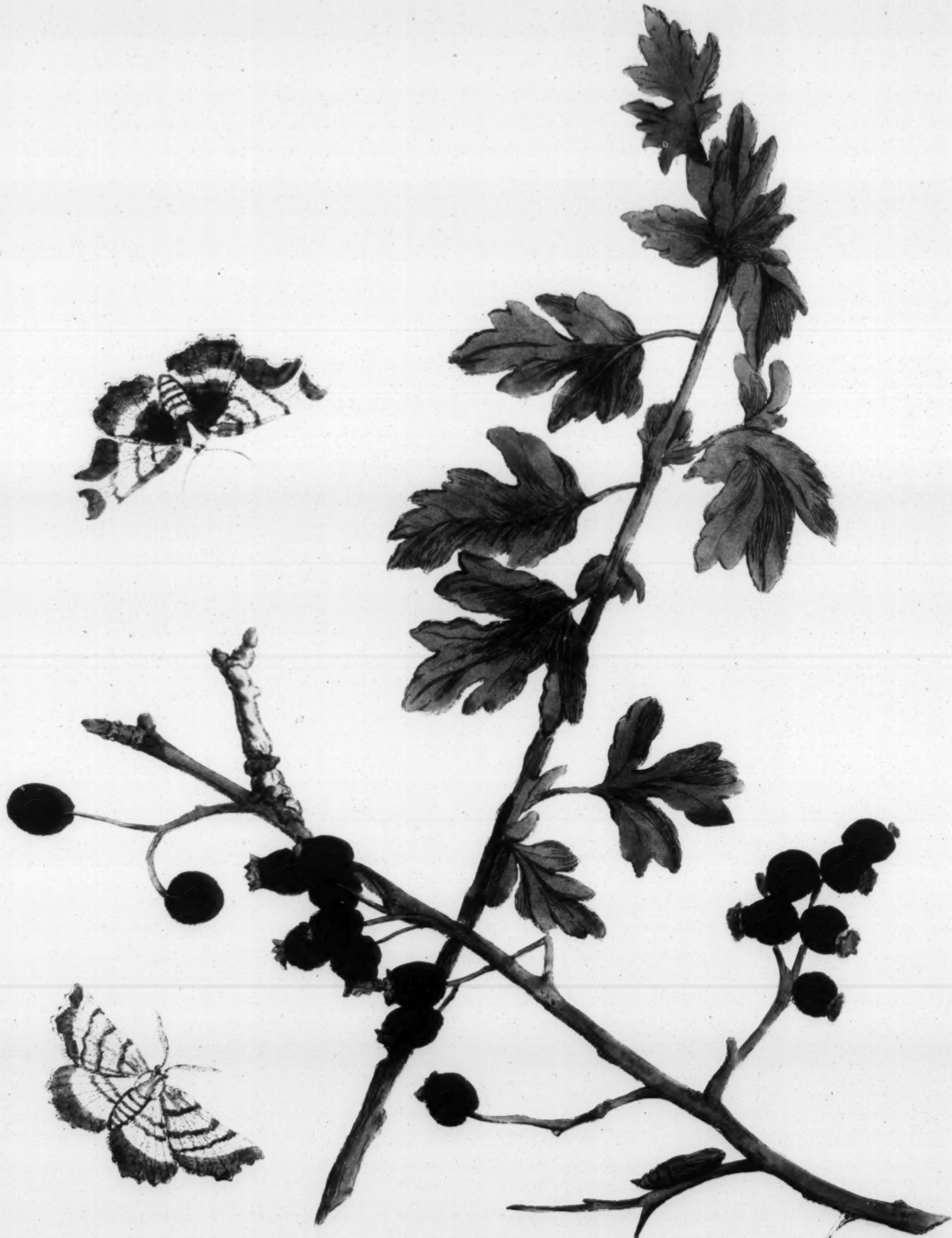


LXXXI



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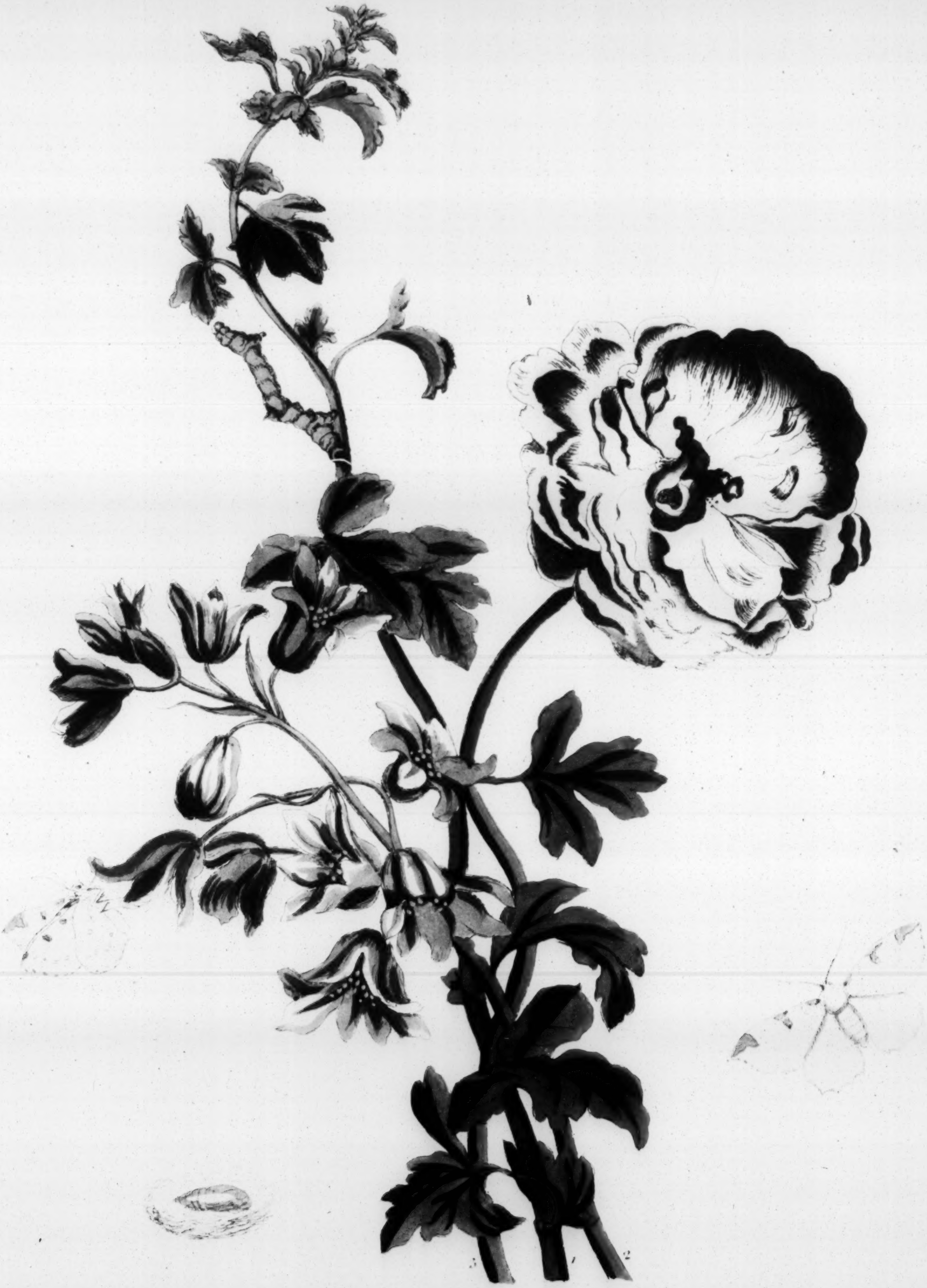


Time, and the *Moth* is bred in *October*, when it may be ſound ſticking on the Bark of Trees, in Parks and other Places.

The ſmooth leaved Elm.

Ulmus ſolio Glabro. Ger. Em. 1481.

L. 1. CH. 3. IV. CL. 1. S. *b.* 4.

THE BRIMSTONE MOTH. The *Caterpillar* is found on the *White-Thorn*, towards the Middle of *September*, when it is full fed, and changes to a *Chryſalis*, within a Spinning, and the *Moth* is produced in the *April* and *May* following. It flies ſlowly, and is eaſily taken in an Evening. This *Moth* breeds twice in a Year; the firſt Time in *April* and *May*, the ſecond in *July* and *Auguſt*.

Figure 1. The White Thorn. 2. The Blue Bells. 3. The Red Ranunculus.

Fig. 1. *Oxyacanthus.* Ger. 2. *Hyacinthus Anglicus.* Ger. 3. *Ranunculus hortenſis flore rubello.*

L. 1. CH. 3. V. CL. 1. S. *b.* 5.

THE SCALLOP WINGED MOTH laid her Eggs on the 5th of *Auguſt*, and eight Days after the *Caterpillars* appeared. I fed them with *White-Thorn* and *Privet*, till the Beginning of *October*, at which Time ſeveral of them changed to the *Chryſalis* betwixt the Leaves ſpun together. They remained in that State during the Winter, and the *Moths* were bred in *May* following. This *Moth* is to be taken, in the Evening, by the Sides of Woods, Hedges, &c.

The White Thorn, with its Fruit.

Meſpilus, Apii folio; ſylveſtris, ſive oxyacantha. C. B. Pin. 458.

L. 1. CH. 3. VI. CL. 1. S. *b.* 6.

THE RICHMOND-BEAUTY, a MOTH. Mr. *Roſel* aſſures us, that the *Caterpillars* feed on the Leaves of the *Pear* Tree, &c. and is to be found at the End of *May* and the Beginning of *June*. They change to the *Chryſalis* amongſt the *Pear* Leaves;

Leaves: They continue fourteen Days in that State, and the *Moth* appears about the End of *June*. This *Moth* is to be taken in an Evening by the Sides of Woods, in green Lanes, Gardens, &c.

See *Roſel*, Cl. 2. Tab. 10.

The *Spaniſh* or *Catalonian* Jaſmine.

Jaſminum humilius magno flore. C. B. Pin.

L. 1. Ch. 3. VII. Cl. 1. S. *b.* 7.

THE HAWTHORN MOTH. The *Caterpillars* that produce this Kind of *Moth* are of various Colours, ſome being much lighter than others. I got ſeveral of them by beating the Boughs of the *White Thorn*, about the Middle of *September*; at which Time many of this Sort ſpin themſelves amongſt the Leaves and change to *Chryſalis*, and the *Moths* are bred in the Middle of *May* following. This is a very ſcarce Fly.

The Carolina Hawthorn.

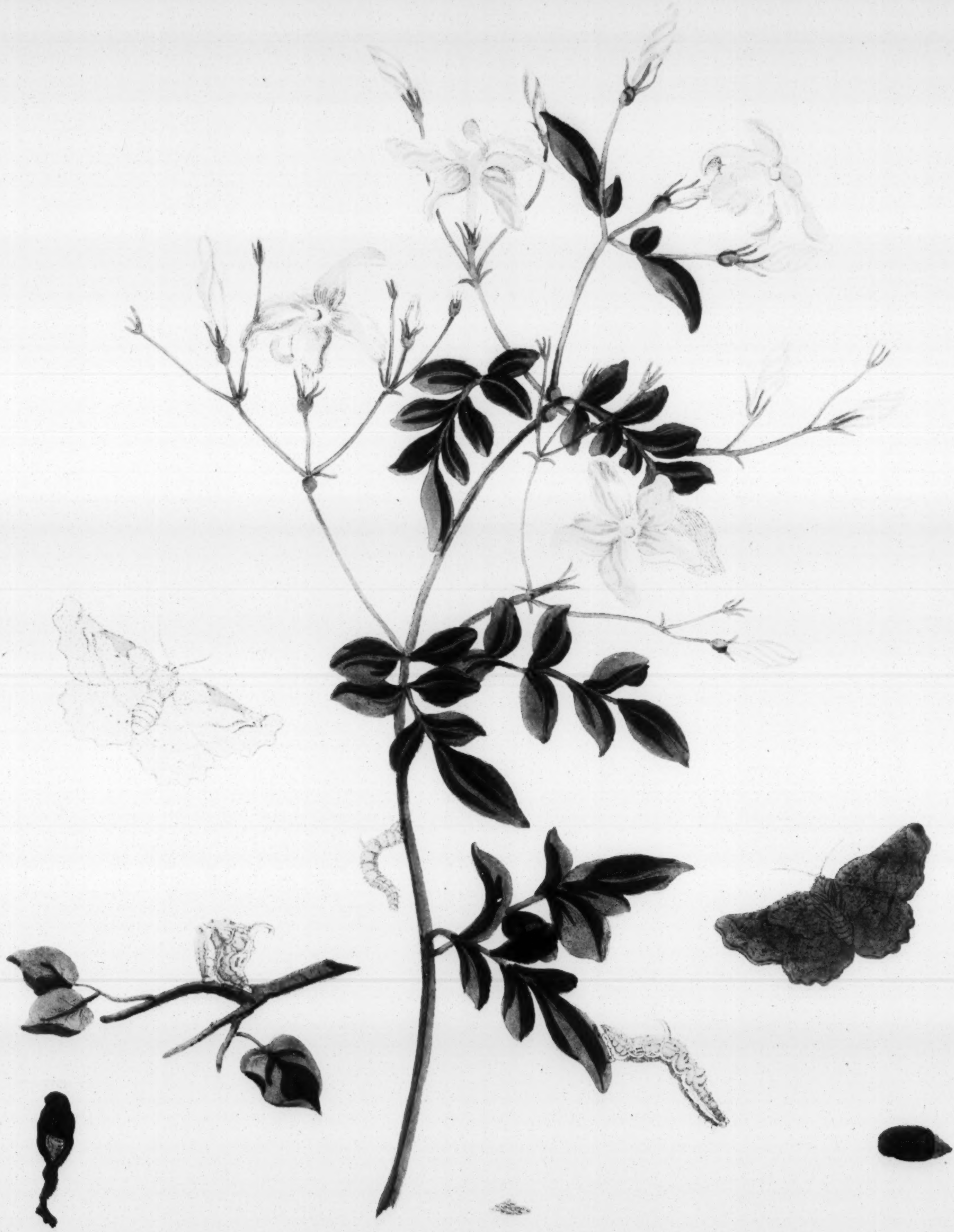
Meſpilus Caroliniana, Apii foliis volgari ſimilis major fructu luteo. Millar.

L. 1. Ch. 3. VIII. Cl. 1. S. *b.* 8.

THE ORANGE MOTH. The four different coloured Flies repreſented in the Plate, were all produced from *Caterpillars* that were hatched from the Eggs of ſuch a Female as is repreſented at *Fig.* 1. The Eggs were of a pale green Colour, and were hatch'd on the 13th *July* 1747; and the young *Caterpillars* were fed with the Leaves of *Black-Thorn*, till about the 20th, when they changed their firſt Skin; on the ſecond of *Auguſt* they changed their Skin again, and, about the Middle of the ſame Month, they left off eating: But, *October* the 25th, being put on *Bramble* Leaves, they began to eat again, and changed their Skin a third Time, *November* the 28th; after which they remained pretty quiet the whole Winter without eating. At the End of *March* they began to eat the freſh Buds of the *Black* and *White-Thorn*, and changed their Skin for the fourth Time. About the End of *April*, one that was ſeparated from the Reſt changed its Skin a fifth Time *May* the 10th: ſpun up *May* the 29th: and the *Moth* was produced *June* the 17th. Several others ſpun up between *May* the 22d and *June* the 5th, and the *Moths* were produced between *June* the 12th and 25th. One that did not change its Skin, for the laſt Time, till *June* the 26th, was given to the Proprietor of this Work; it ſpun up in the Leaves, on the 10th of

July,

LXXXII



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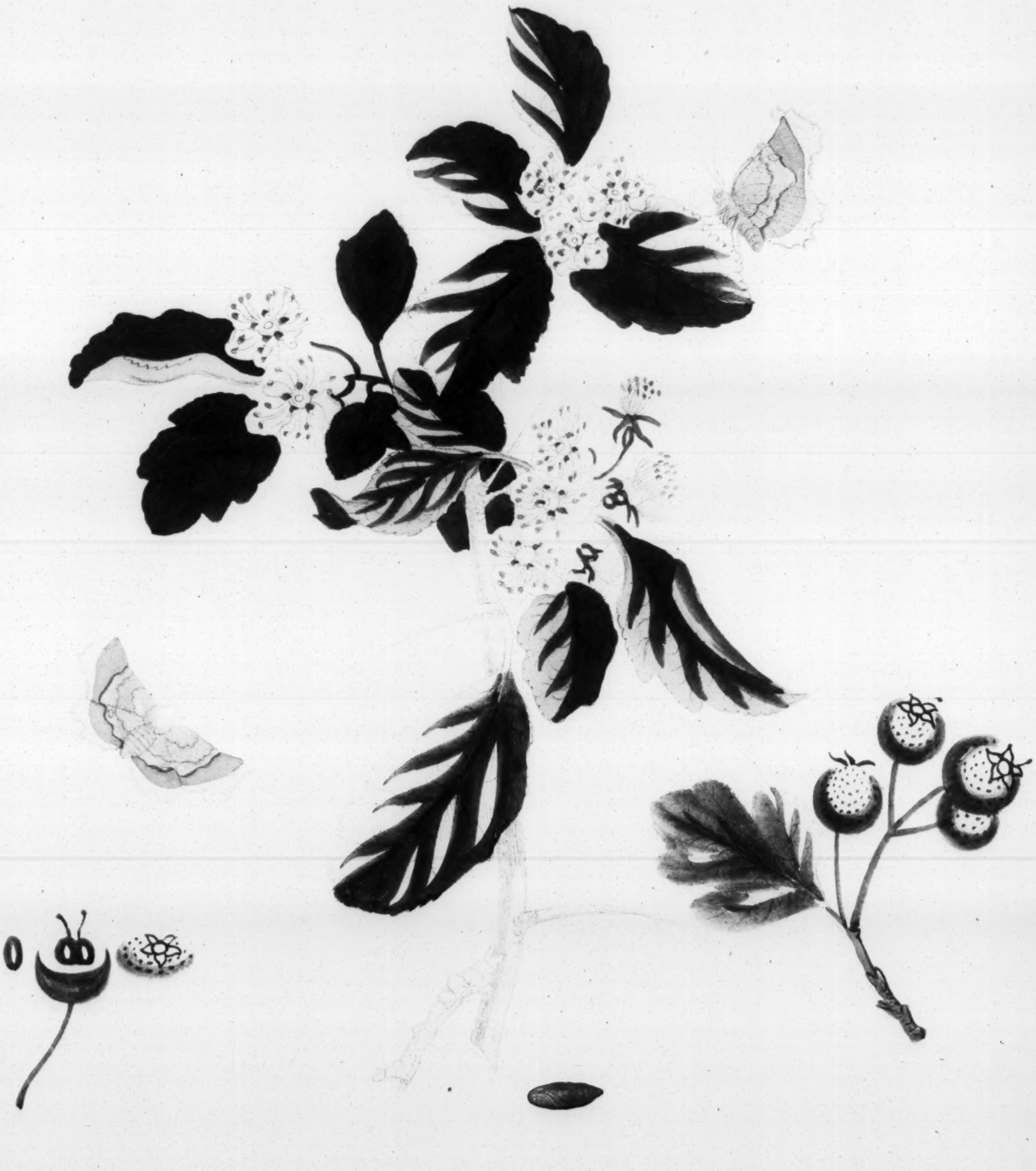
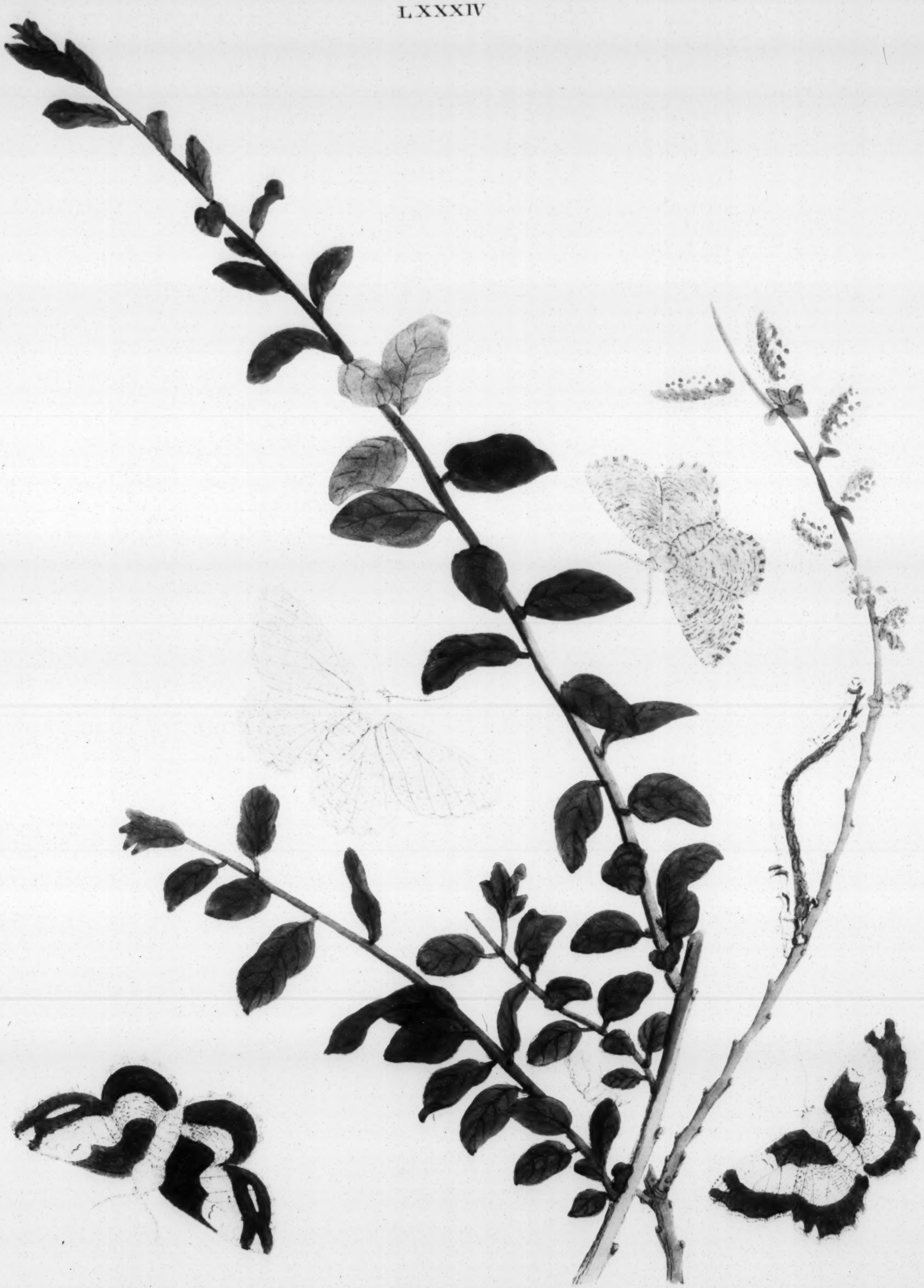




July, and the *Moth*, *Fig. b.* was bred on the 1ſt of *Auguſt*. Of eight *Moths* that were produced, three were Females of the common Orange Kind, and five were Males, one of which only was all over of an Orange Colour. Amongſt the *Caterpillars* there was one that changed its fourth Skin, *July* the 4th, and fed for ſome Time; however, it has not yet changed its fifth Skin, tho' it continued alive, without eating, till *December* the 25th 1748, at which Time it was put on *Bramble* Leaves, and has continued to feed thereon till the preſent 3d of *February* 1748-9.——The Author of this Work was favoured with the preceeding Account by a moſt skilful and exact obſerver, whoſe Name, had he leave to mention it, would do him great Honour.

The Dwarf-Willow.

Salix pumila Alpina, rotundifolia repens, inferne ſubcinerea. C. B. Pin.

CLASS II.

CLASS II.

Hairy Loopers.

SECT. *a*.

Having no Protuberances.

L. 1. CH. 3. I. CL. 2. S. *a*. 1.

THE LARGE MAGPYE, or CURRAN-MOTH. Moſt Gardens and Hedges abound with the *Caterpillars* of this Fly, which feed on *Curran* and *Gooſeberry-Buſhes*, and alſo on the *Black Thorn*, *&c.* They change into the *Chryſalis State*, hanging by the Tail, at the End of *May*, and the *Moths* appear in the Middle of *June*. They are very common, and eaſily taken in an Evening in the Gardens, and moſt other Places, and may likewiſe be catch'd in the Day-time, by beating the Hedges and Buſhes. The *Caterpillar* lives all Winter, and in the Spring begins to feed as ſoon as the Buds are open.

See *Liſter* on *Godart*, P. 13. N. 9. *Merian*, Vol. 1. Chap. 29. *Albin*, P. 43. *Roſel*, Claſs 3. Tab. 2.

The Curran Tree.

Ribes major fructu rubro, Hort. Eyſt.

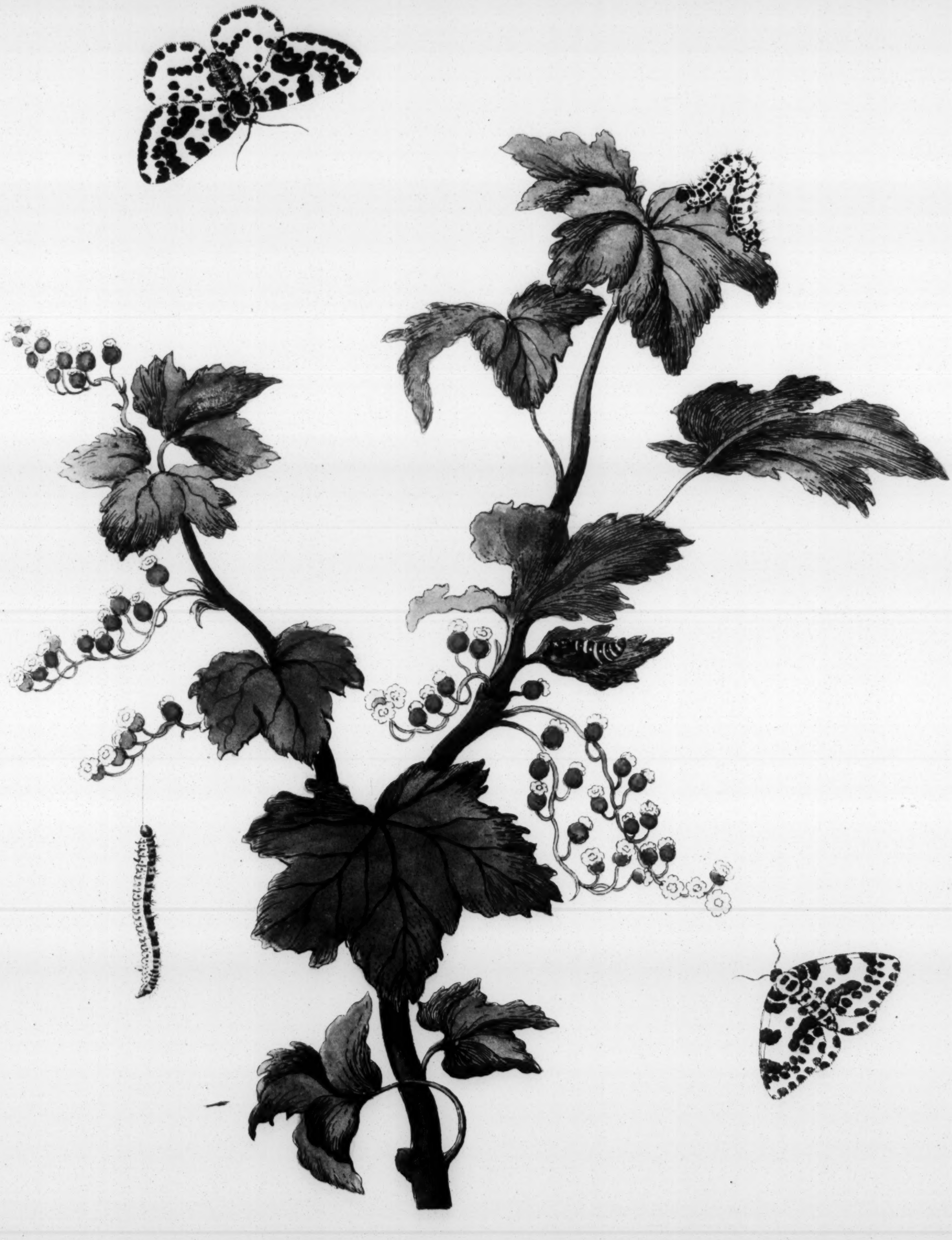
L. 1. CH. 3. II. CL. 2. S. *a*. 2.

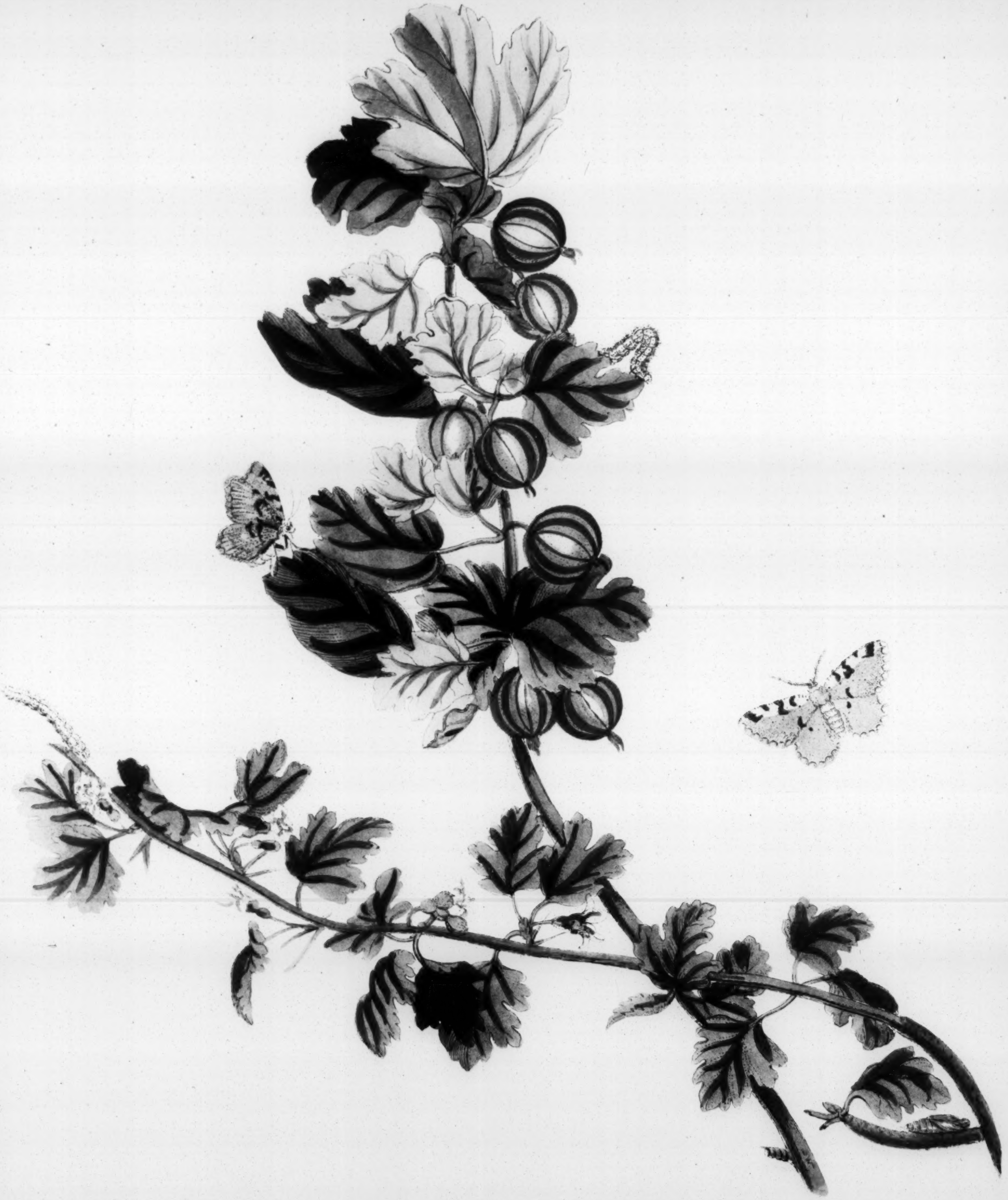
THE GOOSEBERRY-MOTH. The *Caterpillars* are hatch'd at the latter End of the Year, and live all Winter. About the Middle of *May* you may find Plenty of them on the *Gooſeberry* and *Curran* Buſhes; about which Time they go into the Ground, and turn to *Chryſalis*, and about the Middle of *June* the *Moths* appear. They are common in moſt Gardens in the Evening, and may be taken in the Day-time, as the laſt.

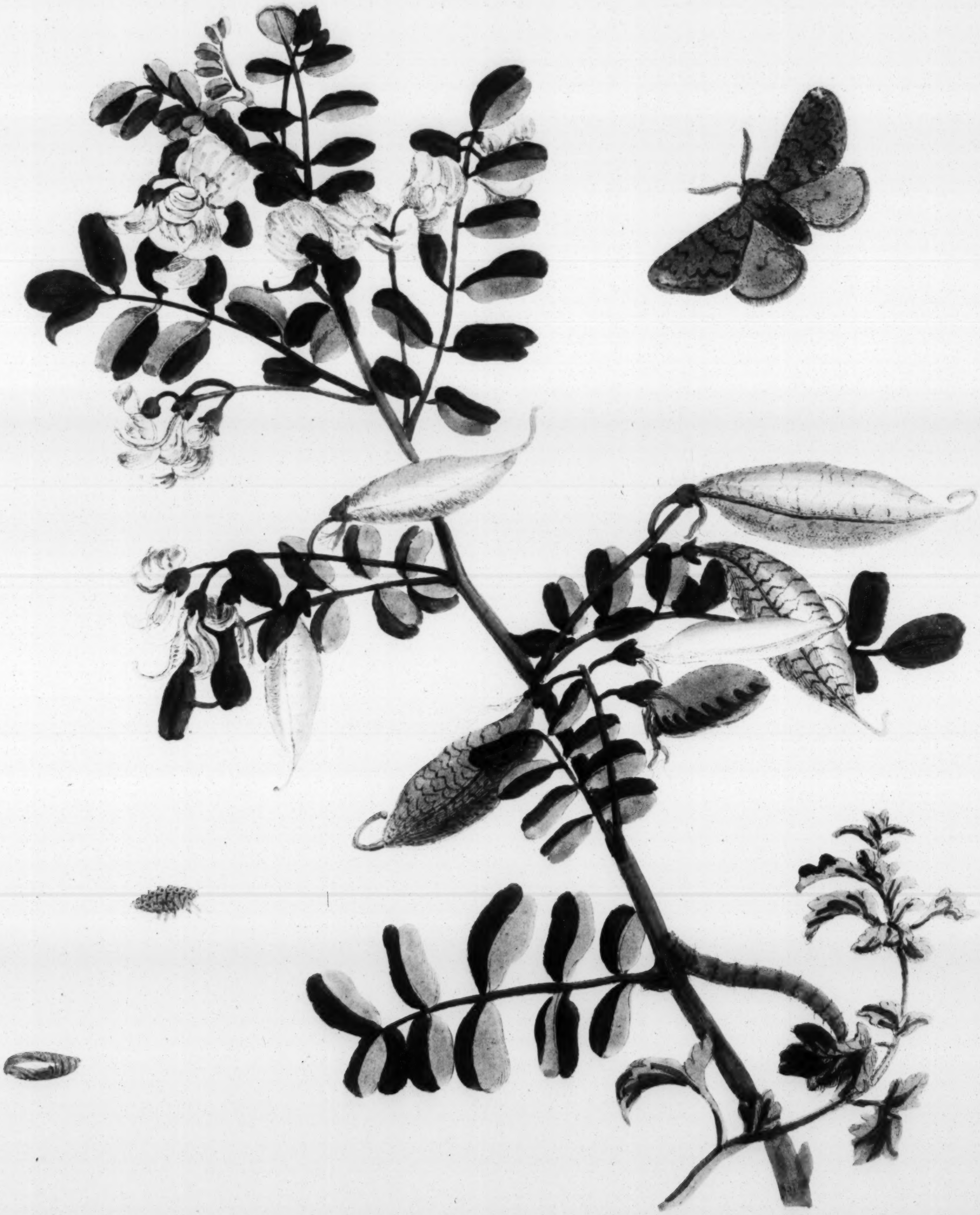
See *Liſter* on *Godart*, P. 19. N. 12. *Merian*, Vol. 1. Chap. 25. *Albin*. P. 47. *Roſel*, Claſs 3. Tab. 4.

The Gooſeberry Tree, with its Flower and Fruit.

Groſſularia, fructu obſcure purpuraſcente. Clus.







Hairy Loopers.

SECT. *b*.

Having Tufts of Hair, partly round each Joint.

L. 1. CH. 3. **I.** CL. 2. S. *b*. 1.

THE BRINDLE-MOTH. This *Caterpillar*, which is not common among the Loopers, was found by Mr *Dandridge* on the *Haſle*, at the Beginning of *June*. It alſo feeds on *Oak*, *&c.* On the 14th of the ſame Month it went into the Ground and changed into a *Chryſalis*, and at the Beginning of *April* following the *Moth* came out. The Females have no Wings. I have had ſeveral of this Kind of *Moth* bred in *February* from the *Chryſalis*, which I got by digging with a Trowel at the Root of Oak Trees. The *Moth* is rarely taken in the Fly State.

Bladder-Sena, *with* Reddiſh-Seed Veſſels.

Colutea veſicaria, veſiculis rubentibus. J. B.

CHAP IV.

Caterpillars ſhaped like Wood-Lice.

CLASS I.

SECT. *a*.

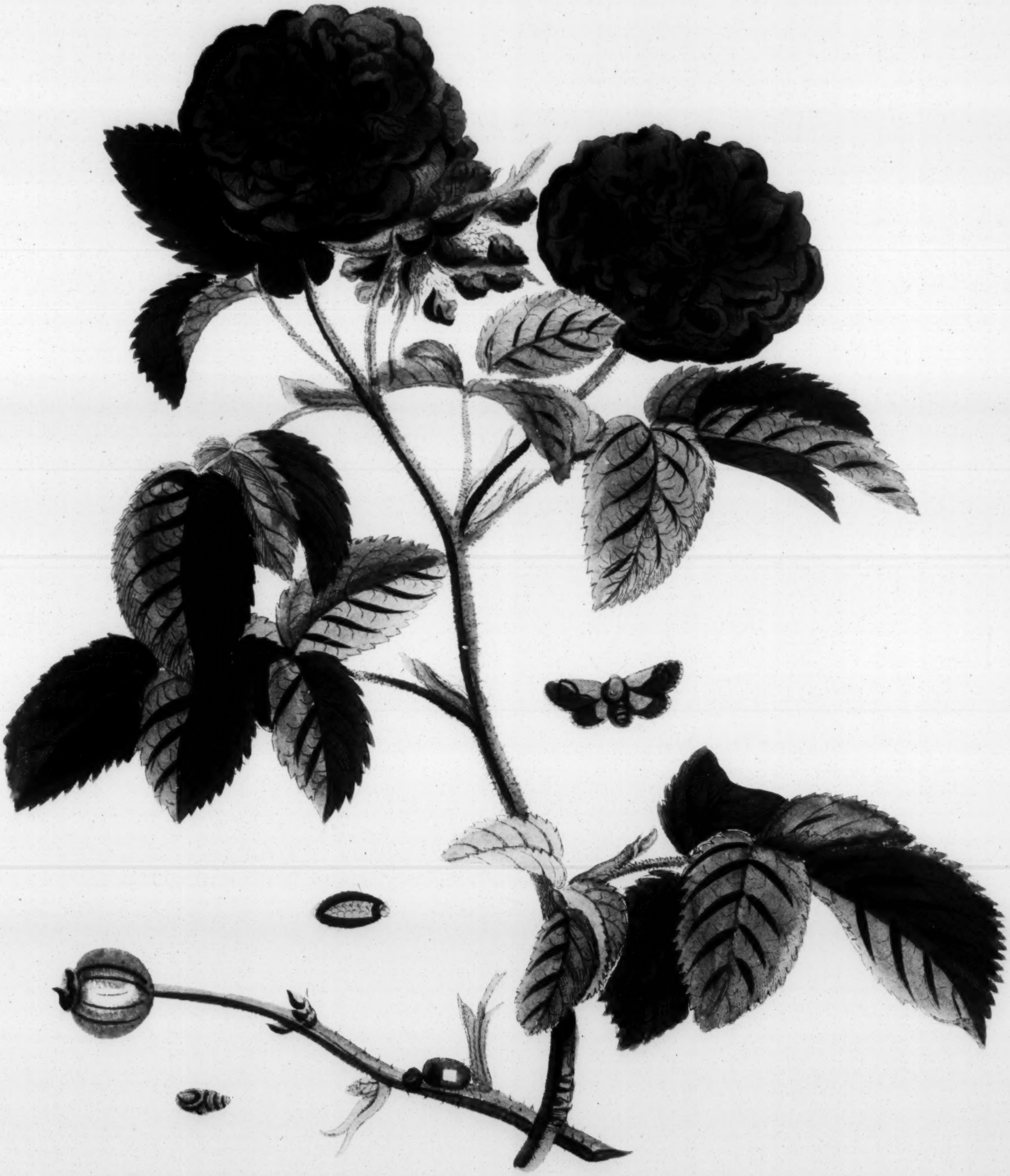
L. 1. CH. 4. I. CL. 1. S. *a*. 1.

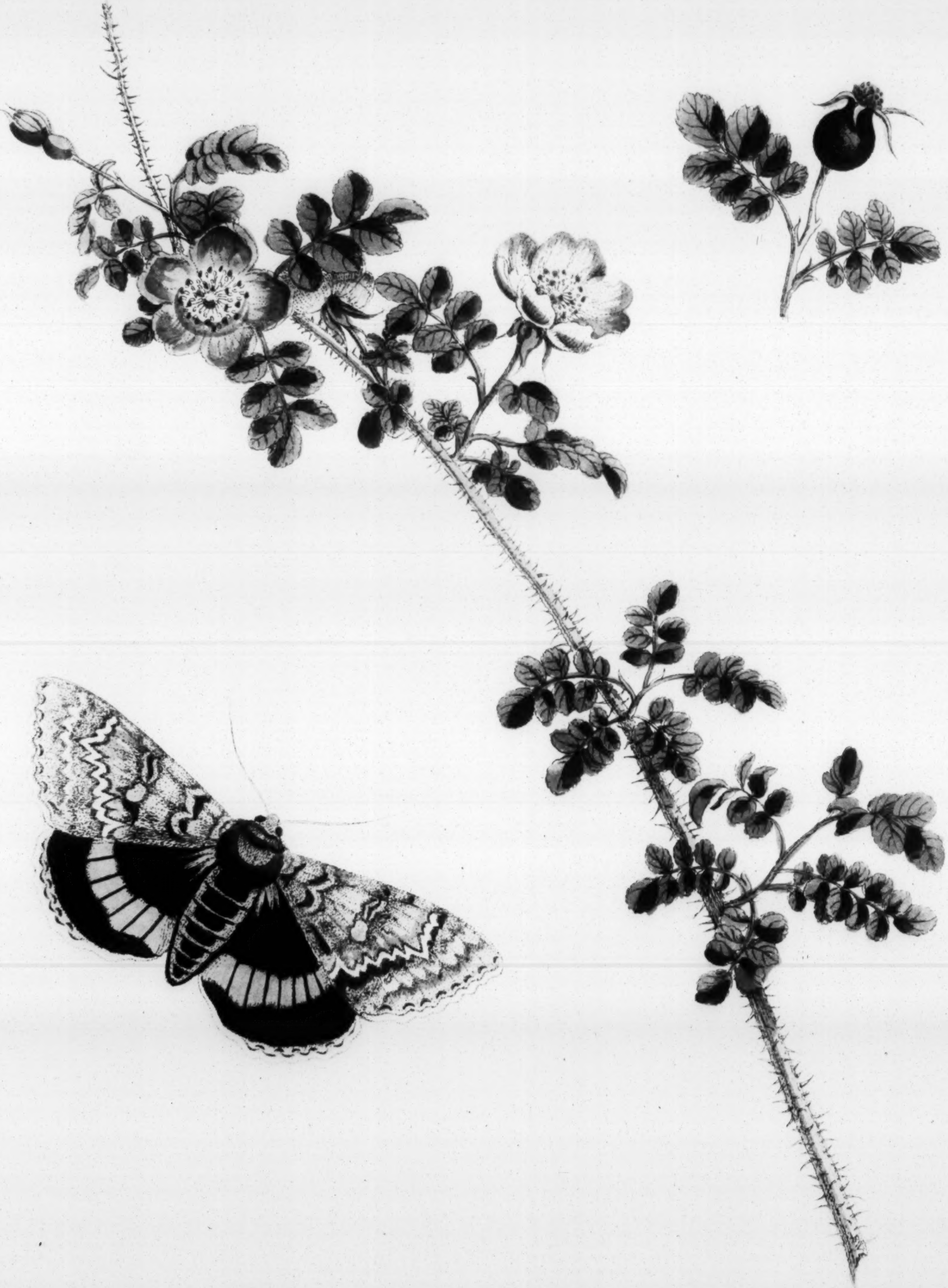
THE SMALL OAK-EGGER-MOTH. This *Caterpillar* I took in *Hornſey*-Wood, on an Oak-Tree, at the Beginning of *October*, ſoon after which Time it chang'd to a *Chryſalis*, by faſtening the Oak-Leaf cloſe to the Bottom of the Box I kept it in with a Spinning. Thus it remained through the Winter, and the *Moth* was bred at the End of *May*. Both *Caterpillar* and *Fly* are very rare.

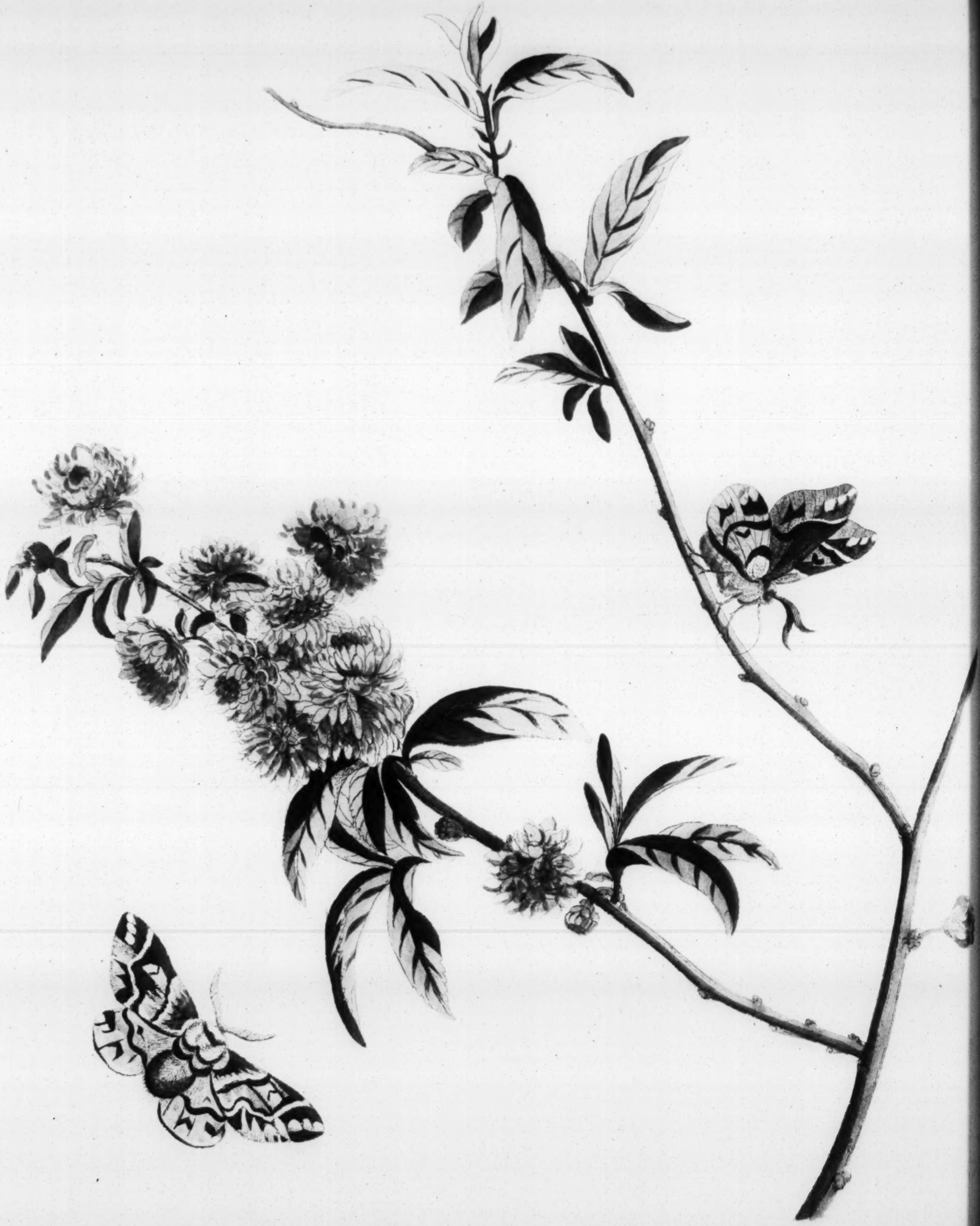
The Double Velvet-Roſe.

Roſa holoſericea, multiplex. Park. Parad.

LXXXVIII







CHAP. V.

Of Moths, whoſe Generation is not yet known.

CLASS I.

SECT. *a*.

L. 1. Ch. 5. I. CL. 1 S. *a*. 1.

THE GLORY OF KENT, a *Moth*. This is the only *Moth* of the Kind that I have yet heard was ever taken in *England* or elſewhere. It was found about the Middle of *April*, 1741, flying in a Wood, in the Day-time, near *Cookham*, by *Weſtram*, in *Kent*. It was taken by Mr. *William Conſtable*, who lives near that Place; and the *Moth* is at preſent in the Poſſeſſion of Mr. *Charles Cabrier*, of *London*.

The Double-Flowering Peach.

Perſica Africana nova, flore incarnato pleno. Tourn.

L. 1. CH. 5. II. CL. 1. S. a. 2.

THE CLEIFDEN NONPAREIL, a *Moth*. This curious Fly was found by Mr *Davenport*, ſticking againſt the Body of an *Aſh* Tree, near *Cleifden*, in *Buckinghamſhire*. It was taken in the Month of *July*: Is at preſent in the Poſſeſſion of *Charles Lockyer*, Eſq; and is the only one of the Sort that I have yet ſeen or heard of.

The Ciphian Roſe.

Roſa; pimpinella minor Scotica, floribus ex albo & corneo eleganter variegatis. Pluk. Alm.

BOOK II.

CHAP. I.

Caterpillars producing *Flies*, which reſemble partly the *Moth*, and partly the *Butterfly*.

CLASS I.

SECT. *a*.

L. 2. CH. 1. Cl. 1. S. *a*. 1.

I.

THE BURNET-MOTH. The *Caterpillars* are to be found feeding on *Hay-Graſs* about the Middle of *May*, at which Time many of them go into the *Chryſalis* State, within ſuch a Spinning as is expreſſed in the Plate, and which they make faſt to the Stalks of Graſs, about a Foot from the Ground. The *Moths* fly about the Middle of *June*, in the Day-time, and are eaſily taken.

See *Albin*, P. 82. *Roſel*, Cl. 2. Tab. 57. Vol. 1. *Reaumur*, Pl. 12. Pag. 284. Vol. 2. Pl. 2. Pag. 120.

The Burnet Roſe.

Roſa pumila, ſpinoſiſſima, foliis pimpinellæ, glabris, Flore albo. J. B.

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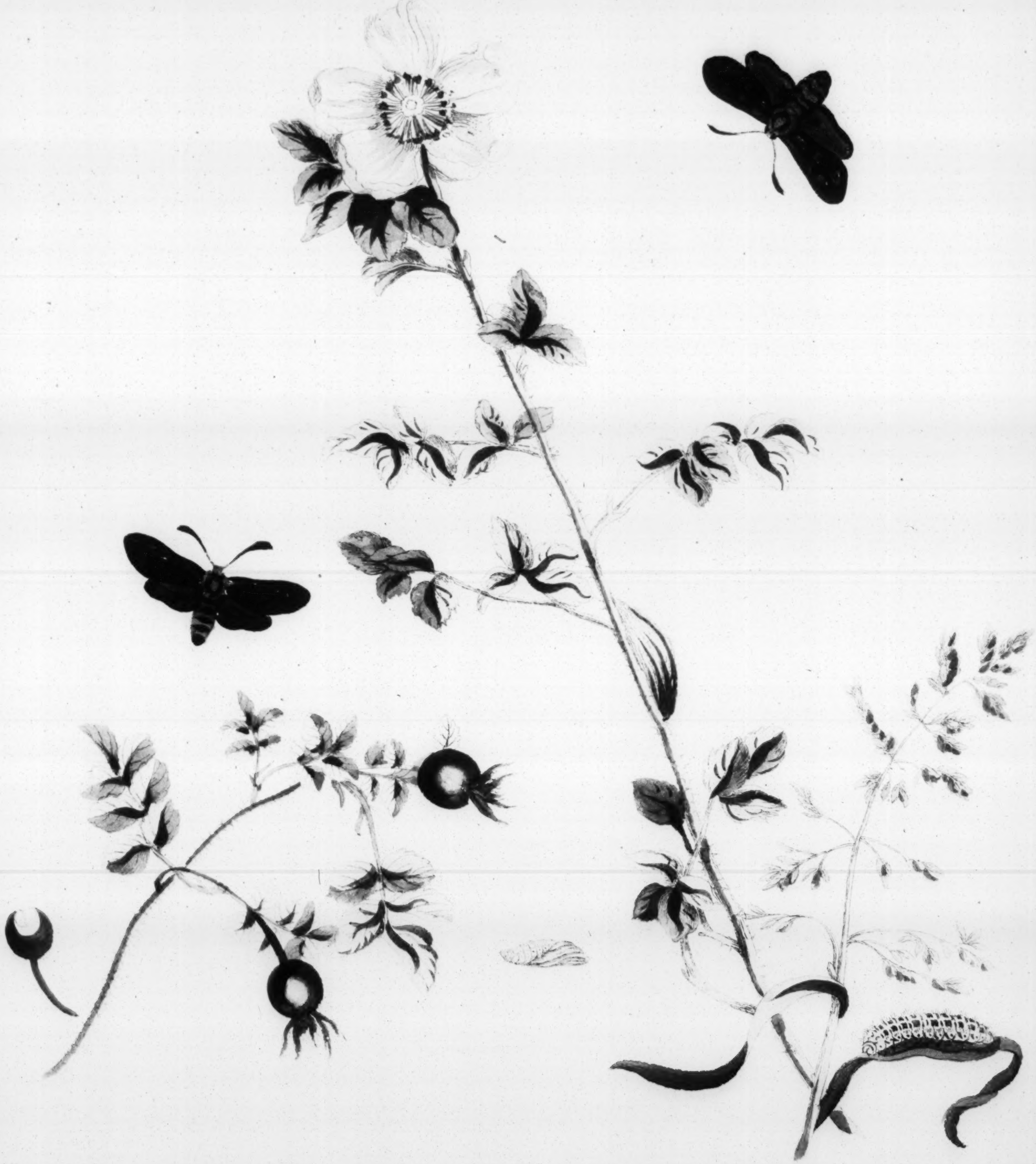

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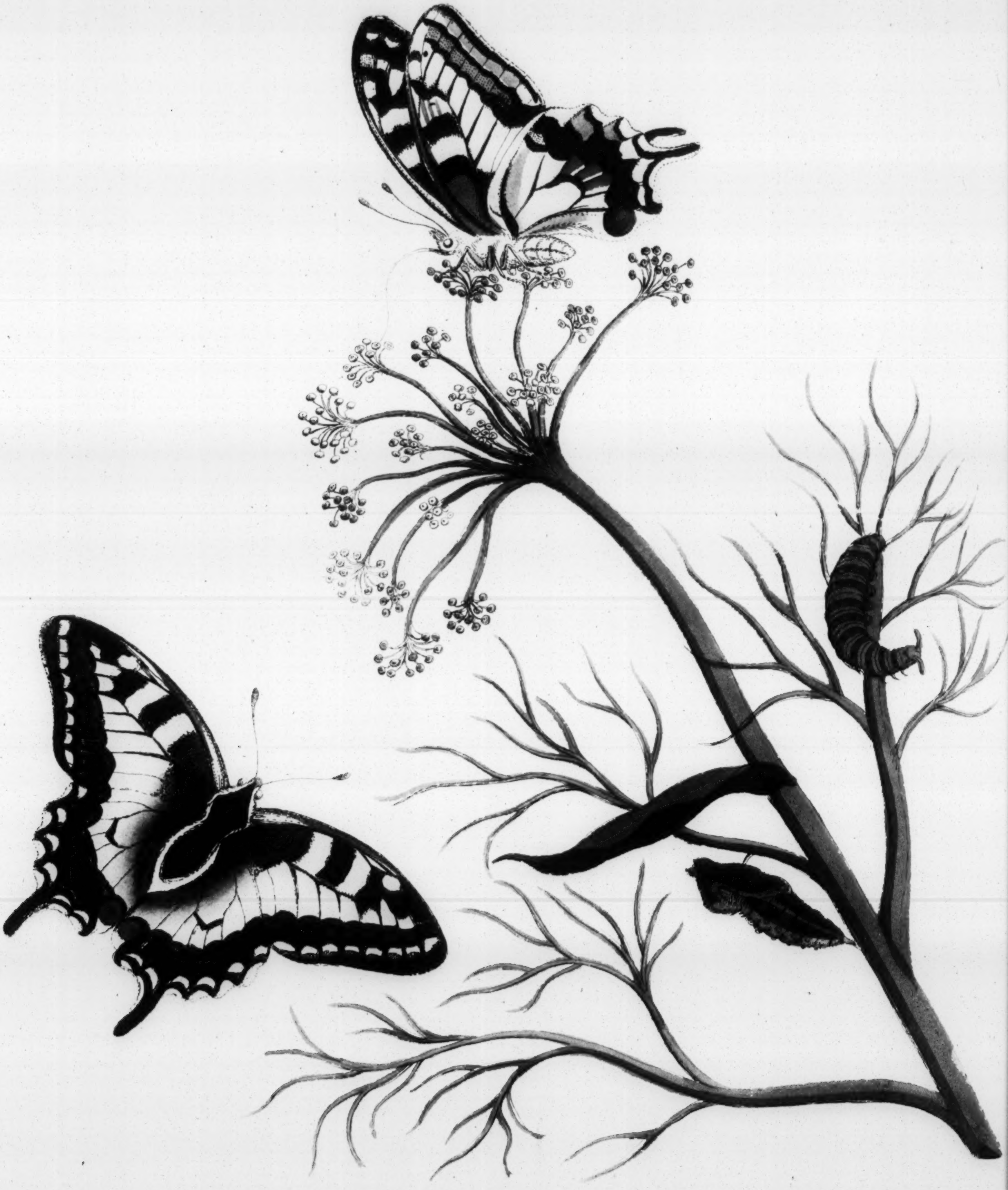

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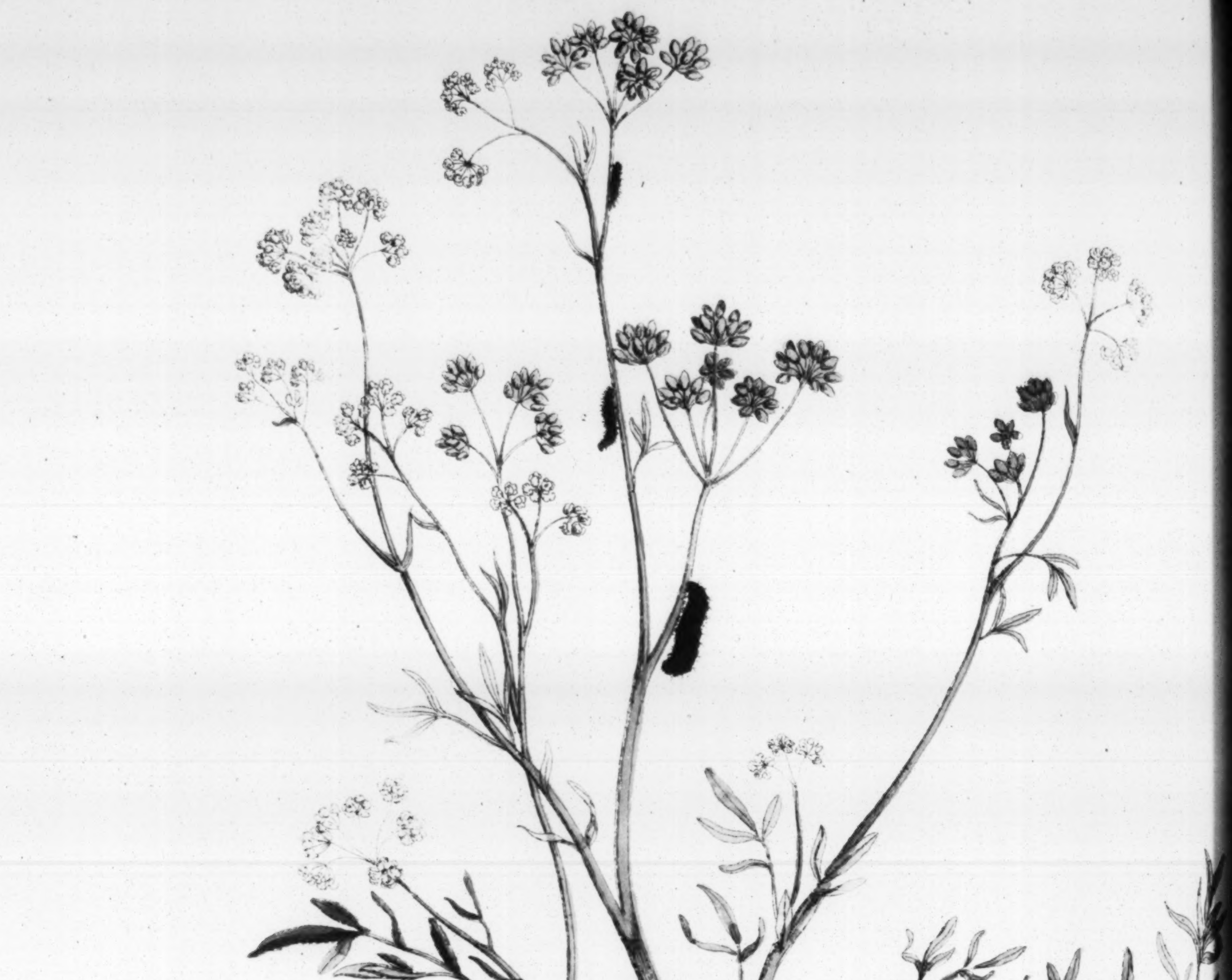


BOOK III.

CHAP. I.

CATERPILLARS, *whoſe Bodies are* SMOOTH, *producing* BUTTERFLIES.

CLASS I.

SECT. *a.*

CATERPILLARS *without any* Protuberances, *whoſe* Chryſalis *is fixed by the Tail, and hangs in an Horizontal Poſition, by Means of a Thread faſtened round the Back and on each Side, and producing* SWALLOW-TAIL BUTTERFLIES.

L. 3. CH. 1. I. CL. 1. S. *a.* 1.

THE SWALLOW-TAIL BUTTERFLY is produced twice a Year. The firſt Brood appears in *May*, the ſecond towards the End of *July*. Being in a Meadow near *Cookham*, in *Kent*, on the 5th Day of *Auguſt*, 1748, I obſerved a Female *Swallow-Tail* hovering over certain Plants, which taking particular Notice of, I found to be the *Meadow Saxifrage*, and examining them carefully, I diſcovered four Eggs juſt laid by the *Fly*, wherewith I was highly pleaſed. On the 13th of the ſame Month theſe Eggs produced *Caterpillars*, of Size and Colour as expreſſed at Figure 1.

On the 19th one of the *Caterpillars* ſhifted its Skin, and appeared like Figure 2. On the 23d it changed again to the Likeneſs of Figure 3. On the 4th of *September* it became like Figure 4. On the 11th of the ſame Month it appeared in its fifth and laſt Skin, which was extreamly beautiful, as expreſſed at Figure 5. On the 22d the *Caterpillar* was full grown, and fixed itſelf in the Manner of Figure 6, in order to change into the *Chryſalis* 7, which was produced on the 26th of *September*; in which State it remains, *January* 20, 1748-9. I fed the *Caterpillar* from its being firſt hatched with the green Leaves of the common Carrot, which it eat plentifully. This fine *Butterfly* may be taken in the Meadows and Clover Fields about *Cookham*, near *Weſtram*, in *Kent*, at the Times above-mentioned. It flies ſo ſwiftly that it is in vain to follow it, you muſt therefore wait 'till it ſettles, and then, if you are near, be nimble, and you may catch it without much Difficulty. The *Flies* are repreſented in the next Plate numbered the ſame as this.

See *Reaumur*, Pl. 29. Pag. 486. Alſo Pl. 30. Vol. 1. Pag. 486.

The Meadow Saxifrage.

Seſeli pratenſe noſtras. Park.

L. 3 CH. 3. II. CL. 1. S. *a.* 2.

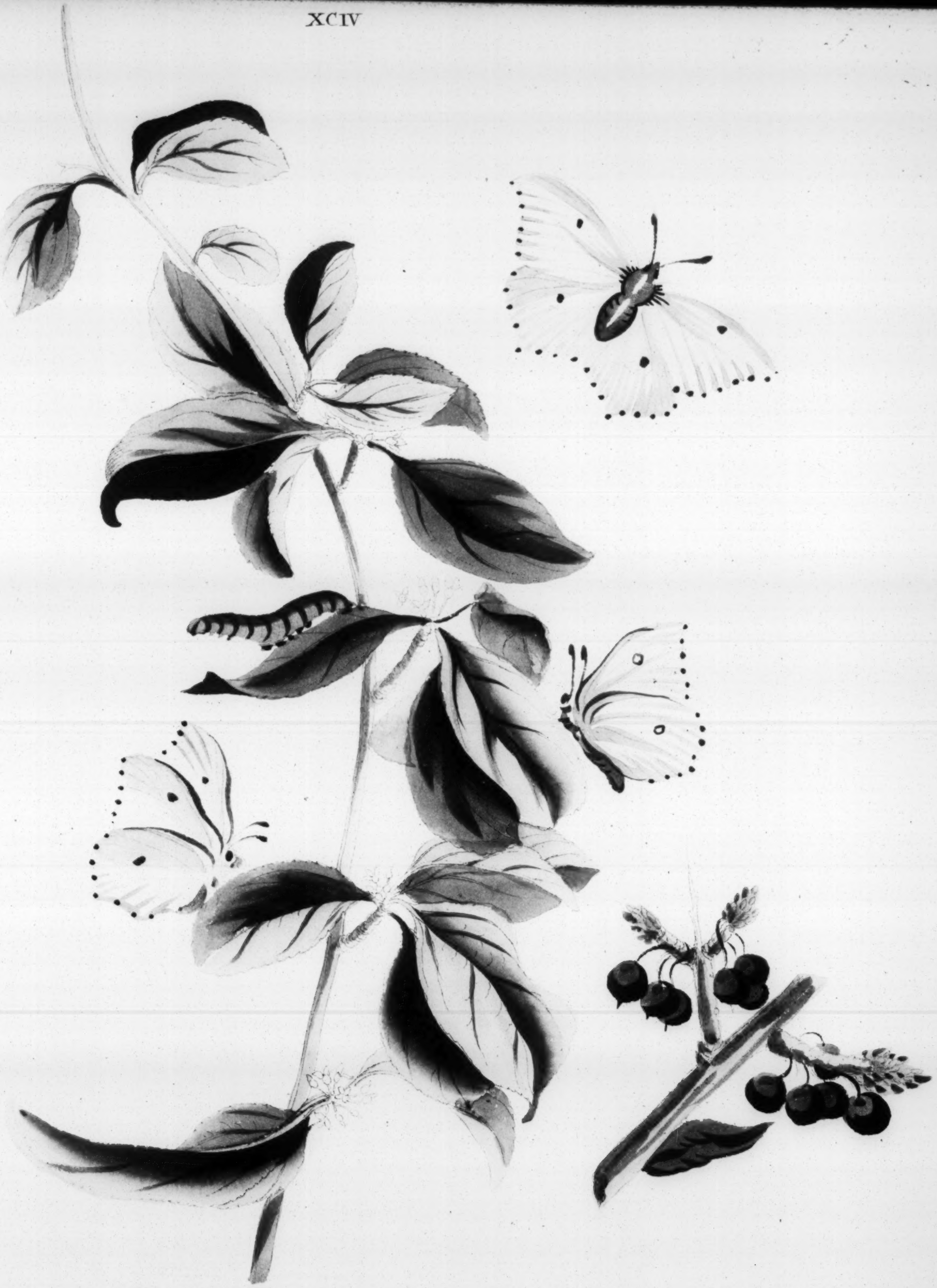
THE BRIMSTONE-BUTTERFLY lives in the *Fly* State all the Winter Seaſon, for very early in the Spring you will ſee them in the Woods flying about and ſeeking out their Mates. The Food of the *Caterpillar* is reported by Mr. *Dandridge* to be the *Buck-Thorn*, on which he ſed it 'till the Middle of *June*, when it changed to a *Chryſalis*, and the *Fly* was bred at the Beginning of *Auguſt*. The *Caterpillars* are rare to be met with, although the *Fly* is common in Woods and Fields of Clover, in the Months of *Auguſt* and *September*.

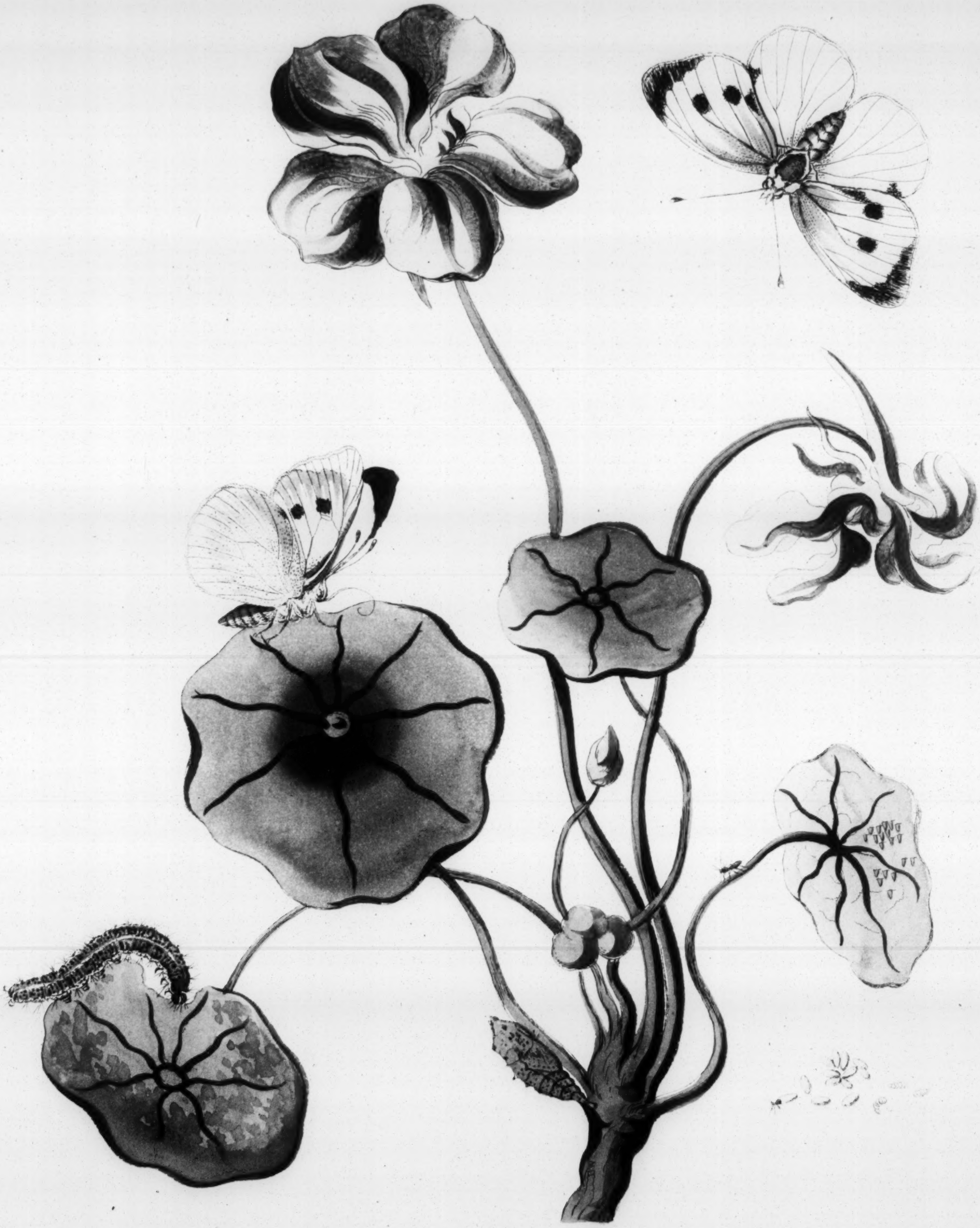
The Buck-Thorn, with its Berries.

Rhamnus Catharticus. C. B. P.

CLASS

XCIV





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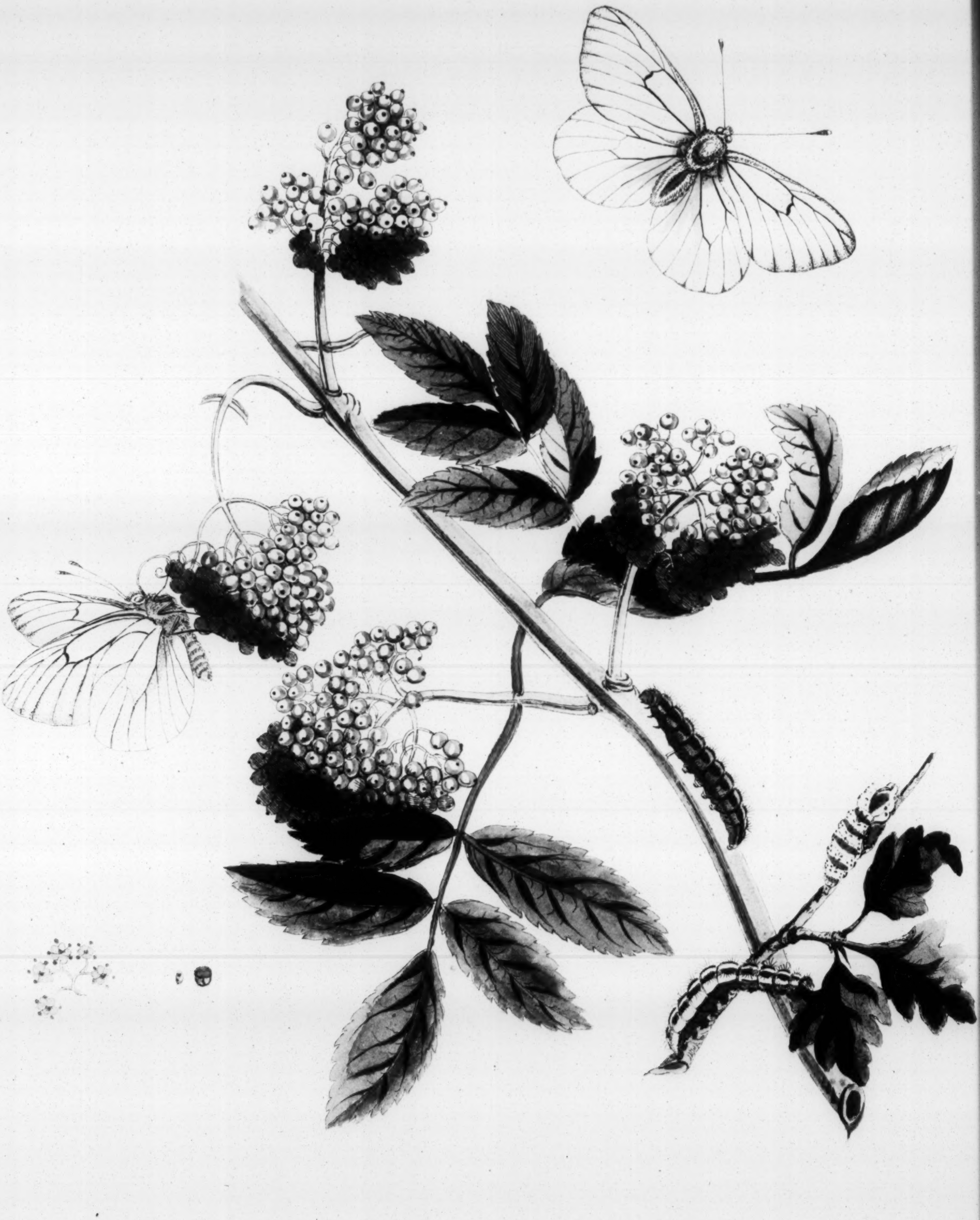


Class II.

Caterpillars *having little or no* Hair.

Faſtening their Chryſalis *as the laſt Sort, and producing* Round-Winged Butterflies.

L. 3. Ch. 1. I. Cl. 2. S. *a.* 1.

The White-Butterfly, with Black Veins. The *Caterpillars* that produce this ſort of *Butterfly* are ſociable and feed together on the *White-Thorn*, till about the Middle of *May*, at which Time they are full fed and change to the *Chryſalis*. The *Fly* is bred in *June*, and is common among *Hay-Graſs*.

See *Merian*, Vol. 2. Chap. 35. *Moff.* P. 103. *Raii*, Hiſt. Inſect. P. 115, N. 5. *Albin*, Plate 2. *Roſel*, Cl. 2. Tab. 3. *Reaumur*, Vol. 2. Pl. 2. P. 120.

The Mountain-Elder, and White-Thorn.

Sambucus, racemoſa rubra. C. B. P.

L. 3. Ch. 1. II. Cl. 2. S. *a.* 2.

The Large White Garden-Butterfly breeds twice a Year. The *Caterpillars* thereof are well known in Gardens and other Places. Their firſt Brood is in *May*, and the ſecond about two Months after. The *Chryſalis* that produces the ſecond Brood is only fourteen Days in that State, and the *Fly* is bred in *July*. Thoſe *Caterpillars* that go to *Chryſalis* about *September* remain in that State all the Winter, and produce their *Flies* in *May*. Theſe *Caterpillars* are great Devourers of *Cabbage* and *Colliflowers* from *June* to *September*, which laſt Month is the Time of their changing into the *Chryſalis* State. In order to preſerve your Cabbages, *&c.* 'tis worth while to deſtroy their *Chryſalides* in the Winter, when they may commonly be found under the Coping of Garden Walls, Pales, or any other Places a little ſhelter'd: Their Eggs likewiſe ſhould be ſought after

after, and may be ſound in great Numbers together on the under Sides of the Leaves. *Note*, The *Swallow-Tail Butterfly* is always bred at the ſame Time as this *Fly* is.

See *Godart*, Sec. 1. Num. 7. *Merian*, Vol. 1. Chap. 45. *Mouſet*, P. 103. *Raii*, Hiſt. Inſect. p. 113. *Liſt.* on *God.* P. 16. Fig. 7. *Albin*, Plate 1. *Roſel*, C. 2. Tab. 4.

The Naſturtium Flower.

Acriviola. J. K. H.

L. 3. Ch. 1. Cl. 2. S. *a*. 3.

III.

THE SMALL WHITE GARDEN-BUTTERFLY breeds twice a Year: The firſt Brood is at the Beginning of *May*, and the ſecond in *July*. The *Caterpillar* feeds on *Cabbage*, *Horſe-Radiſh*, *Creſſes*, &c. Towards the End of *June* they tie themſelves up by the Tail with a Thread, which goes likewiſe croſs their Middle. The *Fly* comes ſorth in *July*, and is very common.

See *Albin*, P. 51. *Roſel*, Cl. 2. Tab. 5. *Liſter* on *Godart*, P. 12. N. 8. *Reaumur*, Vol. 1. Pl. 29. Pag. 486. Vol. 2. Pl. 2. Pag. 120.

The Double-Flowering Almond.

Amygdalus ſativa flore pleno. J. R. H.

L. 3. Ch. 1. Cl. 2. S. *a*. 4.

IV.

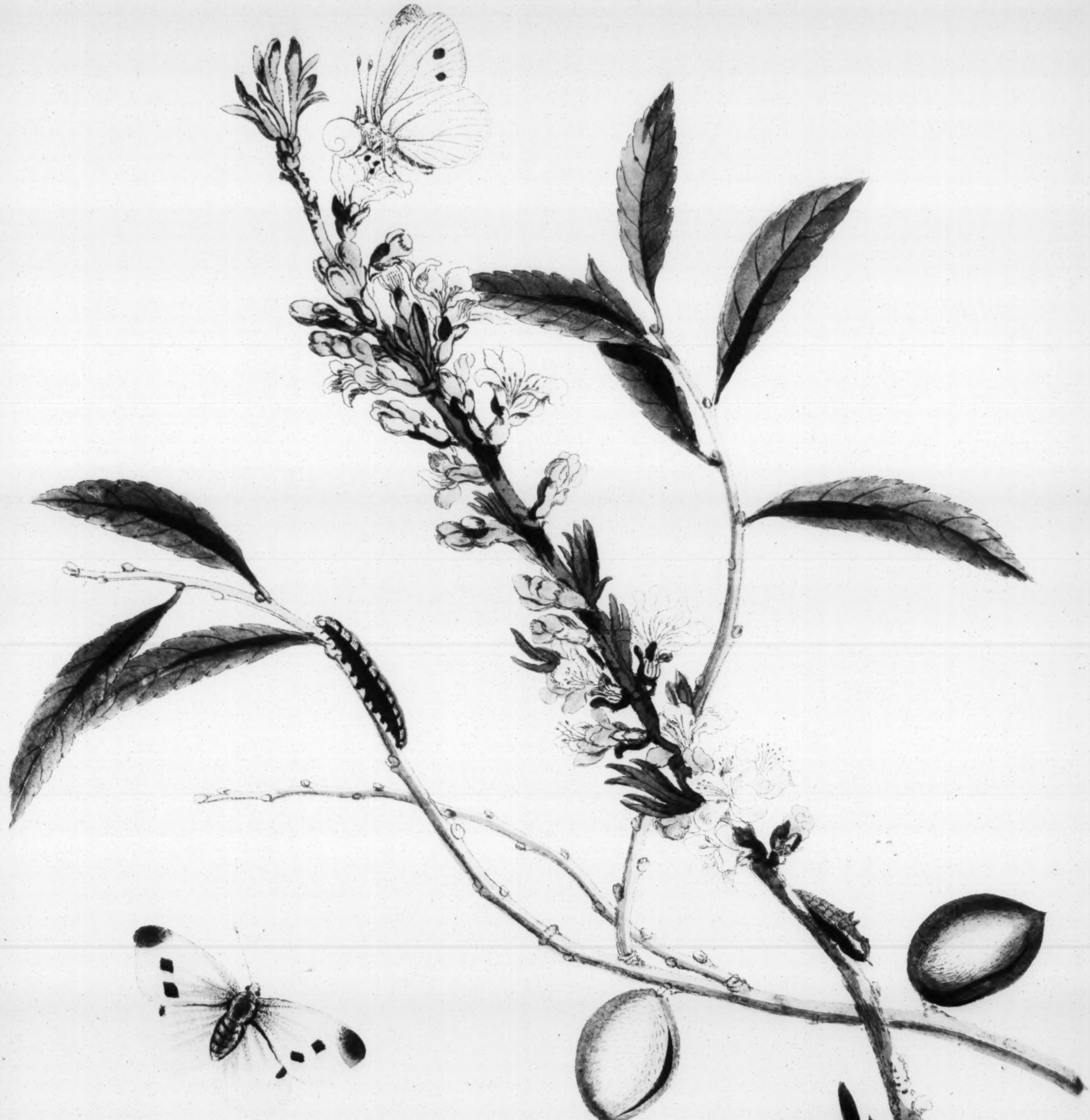
THE WHITE-BUTTERFLY with GREEN VEINS. This alſo breeds twice a Year: Its firſt Brood is in *May*, the ſecond in *July*. The *Caterpillar* feeds on *Cabbage*, &c. like the foregoing, ties itſelf up in the ſame Manner, and the *Fly* is bred in *July*. It is very common, and may be taken in moſt Gardens.

See *Albin*, P. 52. *Merian*, Vol. 2. Chap. 39.

The Purple Auricula.

Auricula, urſi flore Purpureo. Lob.

V.



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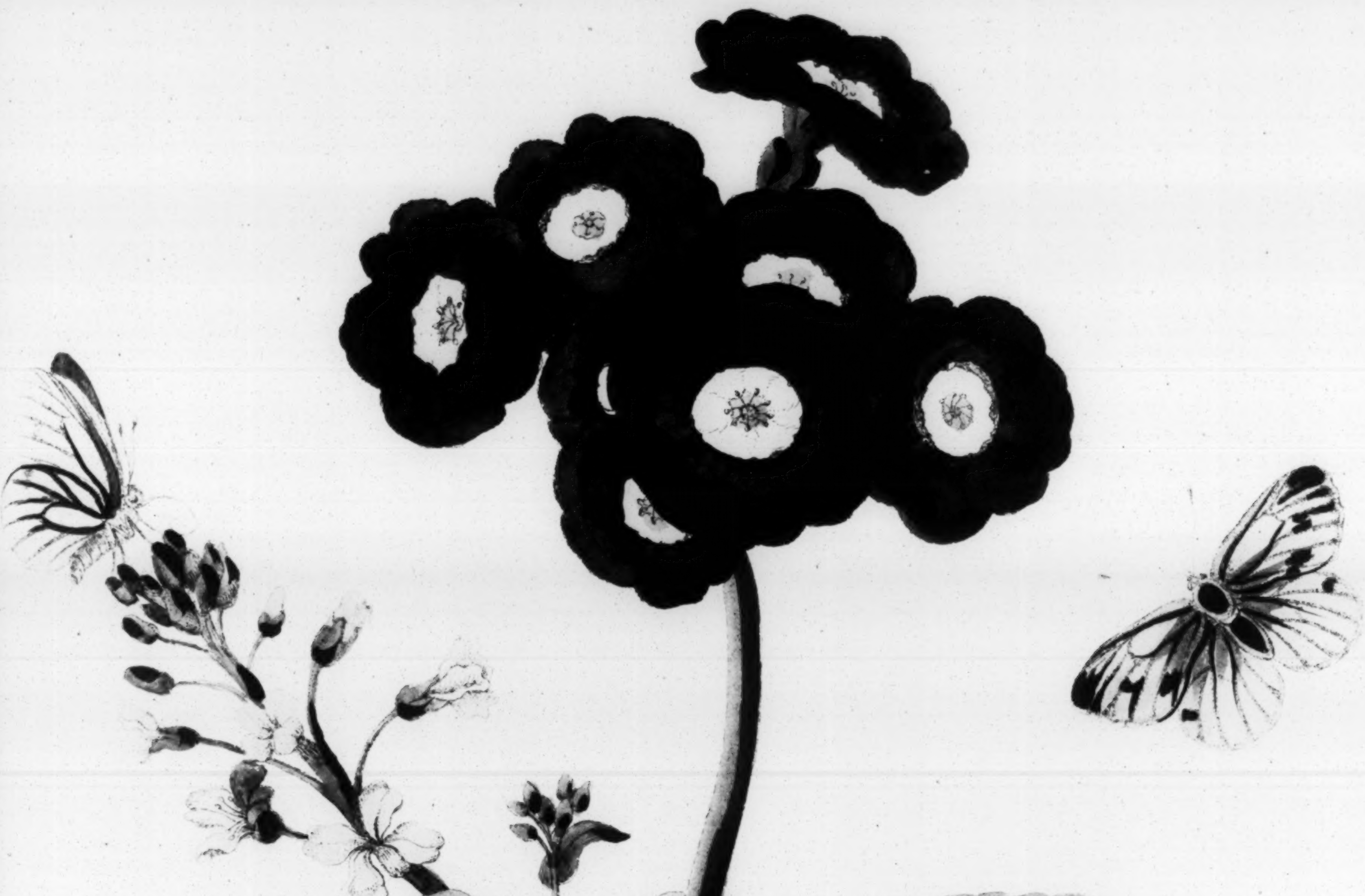

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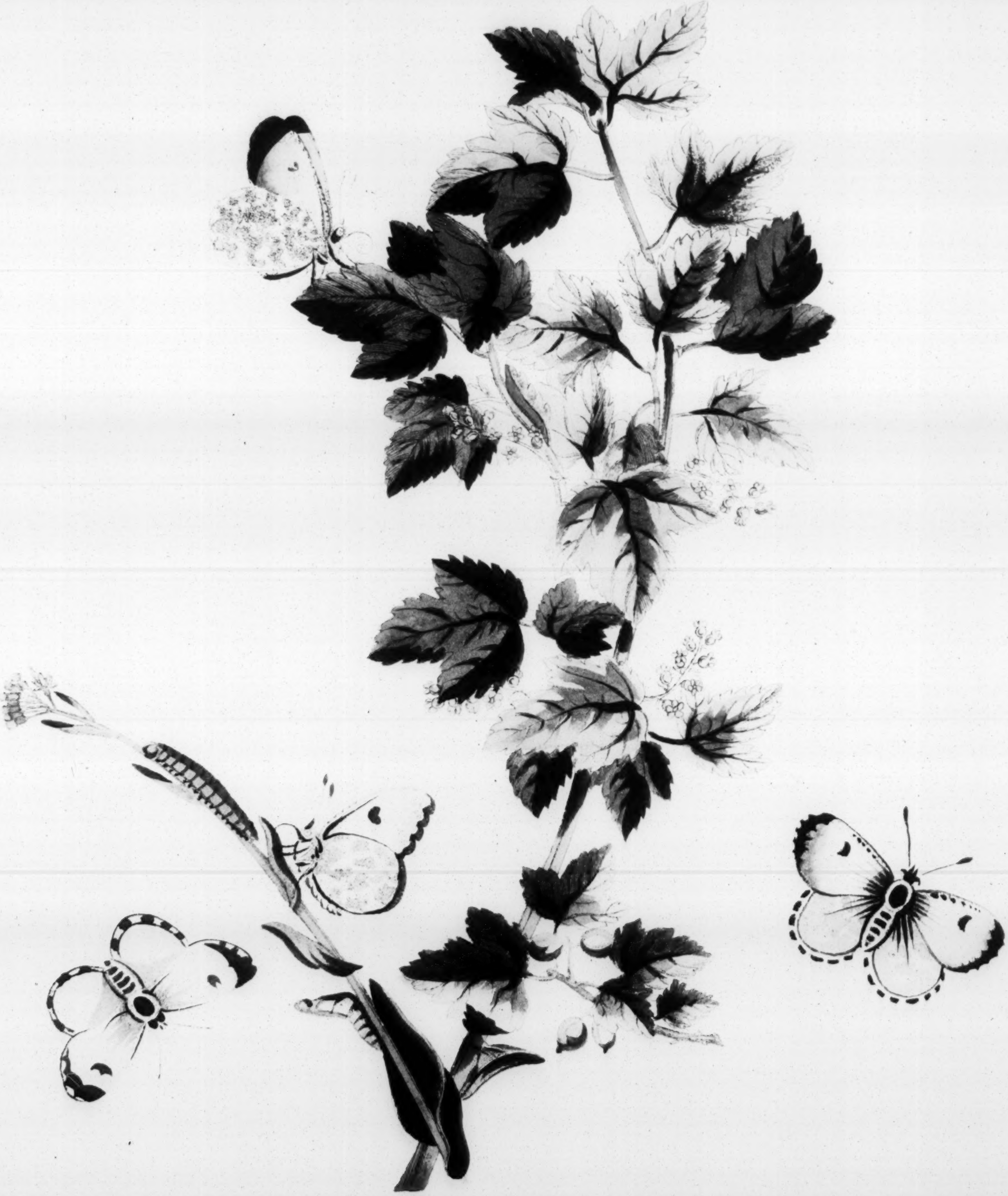


L. 3. Ch. 1. V. Cl. 2. S. *a.* 2.

THE ORANGE-TIP, or Lady of the Woods, A BUTTERFLY.

We are obliged to Mr. *Roſel* for the Diſcovery of the Progreſs of this and many other curious *Flies*. He ſays the *Caterpillar* ſeeds on the *Braſſica Sylveſtris*, or *Wild Cole*, whereon the *Fly* lays its Eggs. The *Caterpillar* is found in *June* and *July*, at which Time it changes into a *Chryſalis*. It remains in that State through the Winter, and the *Fly* is produced in *May*. It is very common in Fields and green Lanes, and breeds but once a Year.

See *Roſel*, Cl. 2. Tab. 8.

The Mountain-Curran, and the Wild Cole.

Ribes Alpinus dulcis. J. B. *Braſſica Sylveſtris.*

CATERPILLARS, having little or no Hair, producing SCALLOP-WINGED BUTTERFLIES.

SECT. *b*.

I.

THE MARMORIS, or MARBLE-BUTTERFLY. On the 8th of *July*, 1748. I took with my Net ſeveral Females of this ſort of *Fly*, which is very common amongſt the *Hay-Graſs*. I put them in a Box, taking Care to hurt them as little as poſſible, with full Hopes that ſome of them would lay their Eggs; and according to my Wiſhes the next Morning I had 160 Eggs, which, when firſt laid, were of a fine yellow Colour, but in leſs than a Minute's Time they became perfectly white, and are not glutinous like many other Sorts. On the 27th and 28th of the ſame Month the young *Caterpillars* appeared, and were put on common Graſs to feed: They continued extremely ſmall for ſome Months, and, notwithſtanding great Care was taken of them, only three *Flies* were produced, the reſt all dying in the *Caterpillar* State.

The different Changes obſerved in theſe three were as follows.

		Caterpillars changed their Skins.			Went to *Chryſalis*.	The *Flies* were bred	
The	*1ſt*	*April*, 11	*May* 6	*May* 26	*June* —— 14	*July* —— 11	1748
	2d	*April*, 28	*May* 21	*June* 6	*June* —— 30	*July* —— 23	
	3d	*May*, 1	*May* 21	*June* 9	*July* —— 4	*July* —— 27	

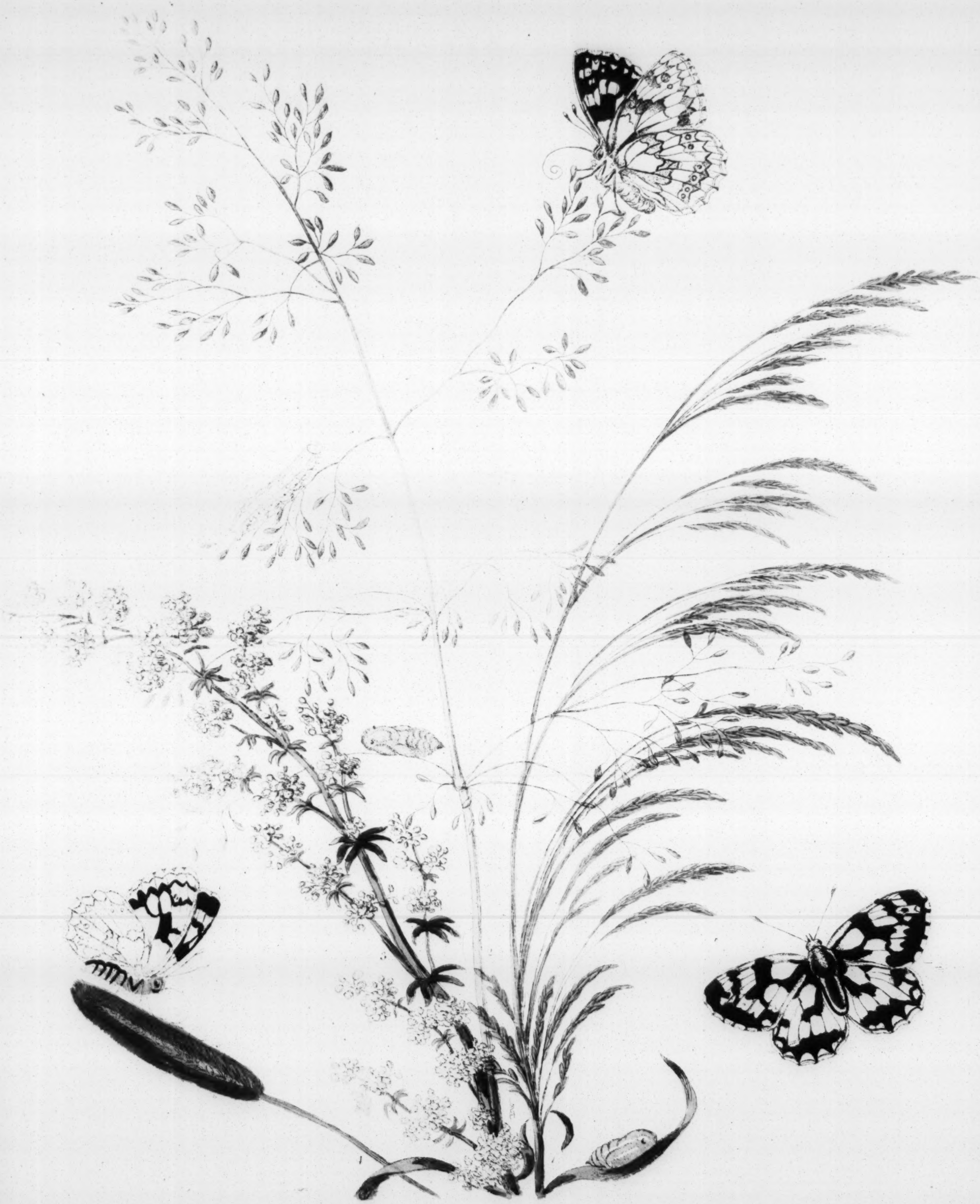
The *Caterpillars* that produced theſe *Flies* changed to *Chryſalis* on the Ground, without faſtening themſelves to any Thing, and were fed all the Time with common Graſs, and it is preſumed changed their Skins twice before the 11th of *April*.

Figure 1. The Bent Graſs. 2. Brown Millet-Graſs. 3. Yellow Ladies-Bedſtraw.

1. *Gramen ſegetum, panicula ſpecioſa*. Park. 2. *Gramen miliaceum majus panicula ſpadicea*. Petiv. 3. *Gallium luteum*, C. B. 4. *Gramen Alopecuroides majus*. Ger.

C

Cl. 2. N. 11.



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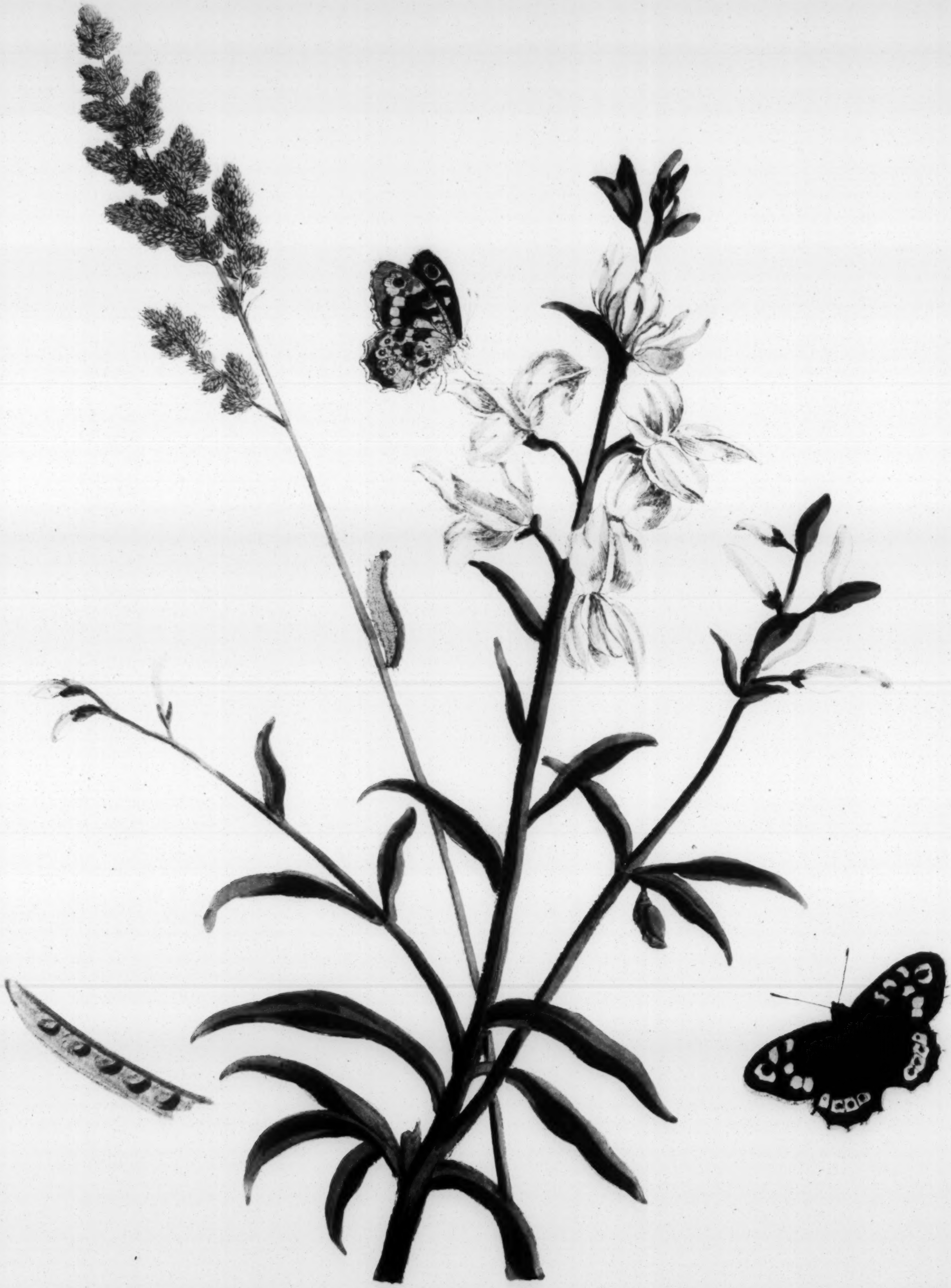

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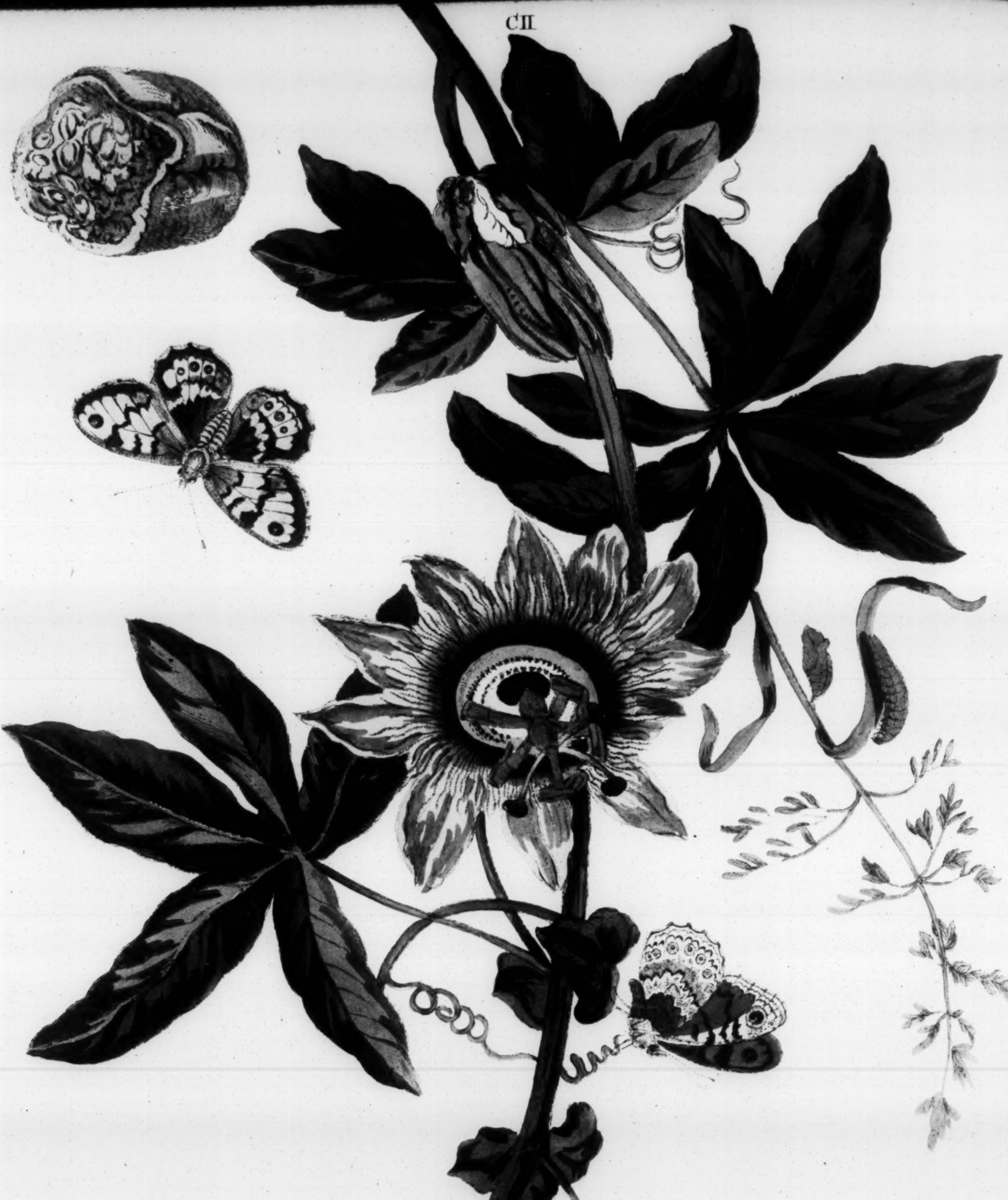

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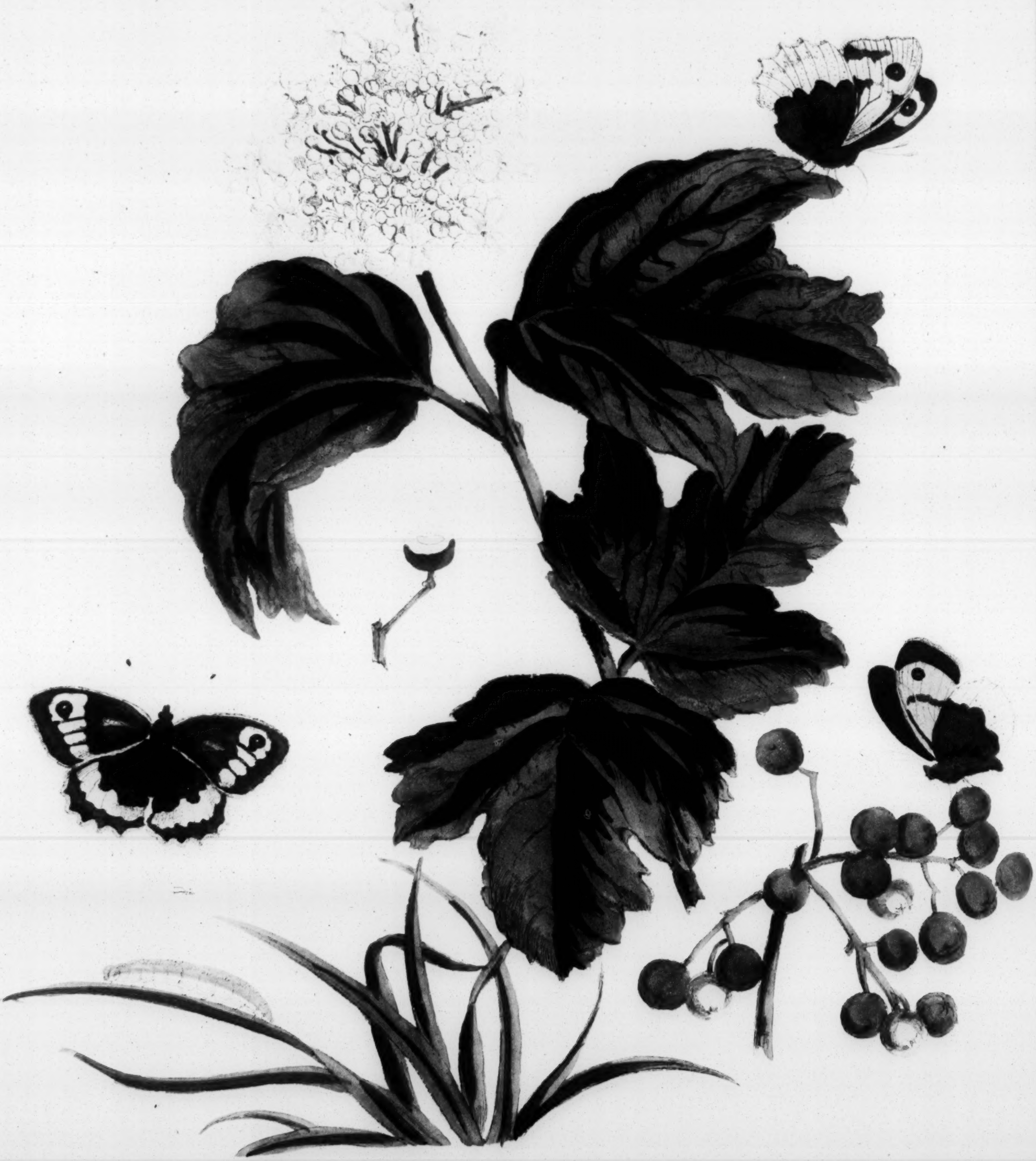


L. 3. Ch. 1. | II. | Cl. 2. S. *b*. 2.

THE MEADOW BROWN-BUTTERFLY. The *Caterpillar* was found by Mr. *Dandridge* on the common Graſs, with which he fed it 'till the 24th of *May*, when it faſtened itſelf up by the Tail, and changed into a ſhort thick green *Chryſalis* ſtreaked with black, and on the 11th of *June* came out the *Butterfly*, which is one of the moſt common ſorts the Fields afford, and yet the *Caterpillar* is rarely found.

See *Albin*, P, 53.

The Water Elder.

Opulus Ruellii. *Inſtit.* R. Herb.

L. 3. Ch. 1. | III. | Cl. 2. S. *b*. 3

THE GREAT ARGUS BUTTERFLY breeds twice a Year: The firſt Time is in *May*, the ſecond in *July*. *Merian* ſays, the *Caterpillar* feeds on *Graſs*, and that it changes to a ſmall green *Chryſalis*, from which proceeds this elegant *Fly*, adorned with brown and black Spots, having two white Horns ſpotted with black, and Eyes of a beautiful Colour. This *Butterfly* is very common; its Flight is not ſwift: It delights to ſettle on dry Banks and Walls, and in Path-Ways, and is not difficult to take. Its *Caterpillar* is ſeldom found.

See *Merian*, Vol. 2. Chap. 4.

The Paſſion-Flower.

Granadilla Pentaphyllos Flore cæruleo magno. Boerh.

L. 3. Ch. 1. | IV. | Cl. 2. S. *a*. 4.

THE WOOD ARGUS-BUTTERFLY. This alſo breeds twice a Year: The firſt Brood appears at the Beginning of *May*, the ſecond at the Beginning of *July*. It flies ſlowly, and is to be taken in Woods, green Lanes, &c. *Reaumur* informs us, that the *Caterpillar* feeds on *Graſs*; that it changed to a *Chryſalis* on the 19th of *June*, and that ten Days after the *Fly* was bred.

See *Reaumur*, Plate 27. Pag. 431.

The Spaniſh Broom.

Geniſta Iuncea. J. B.

SECT. *c.*

CATERPILLARS *having little* HAIR, *producing* BUTTERFLIES, *whoſe Head and Body are much larger (for their Size) than any other* BUTTERFLIES: *Of which there are ſeveral belonging to this Section, whoſe* Caterpillars *have not as yet been diſcovered.*

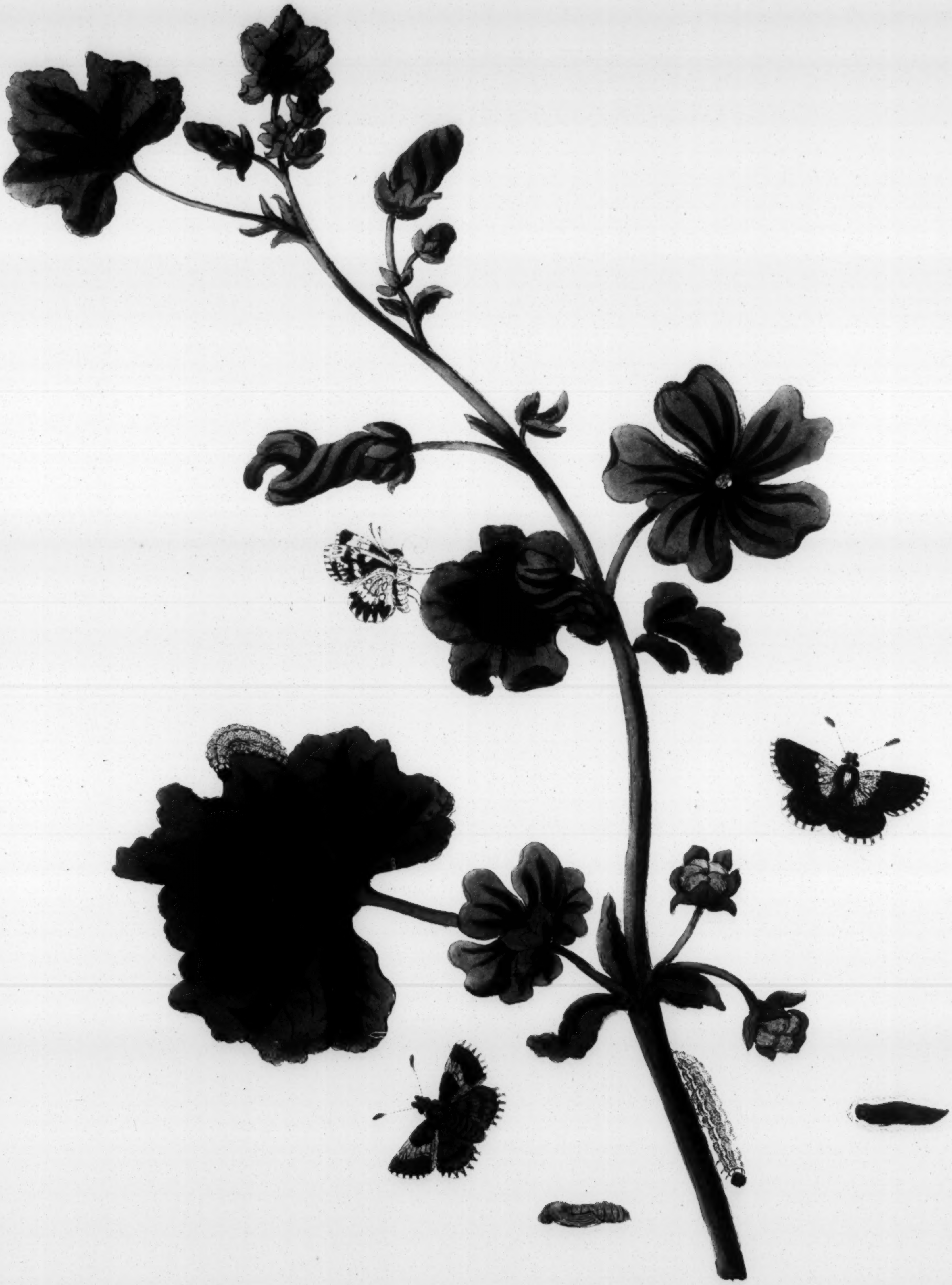
L. 3. Ch. 1. **I.** CL. 2 S. *c.* 1.

THE GRIZZLED BUTTERFLY. Mr. *Roſel* tells us, that the *Caterpillar* of this *Fly* was found on the *Mallow*, with the Leaves of which he fed it till the End of *June*, when it ſpun a Web amongſt the Leaves, and changed to a *Chryſalis*, the *Butterfly* of which was bred the *May* following. This *Fly* is to be taken in Woods and Meads, at the Beginning of *May*: and although ſmall, it flies ſwiftly, ſo that you muſt be very quick to take it.

See *Roſel*, Cl. 2. Tab. 10. *Merian*, Vol. 1 Chap. 48.

The common Mallow.

Malva vulgaris. Park.



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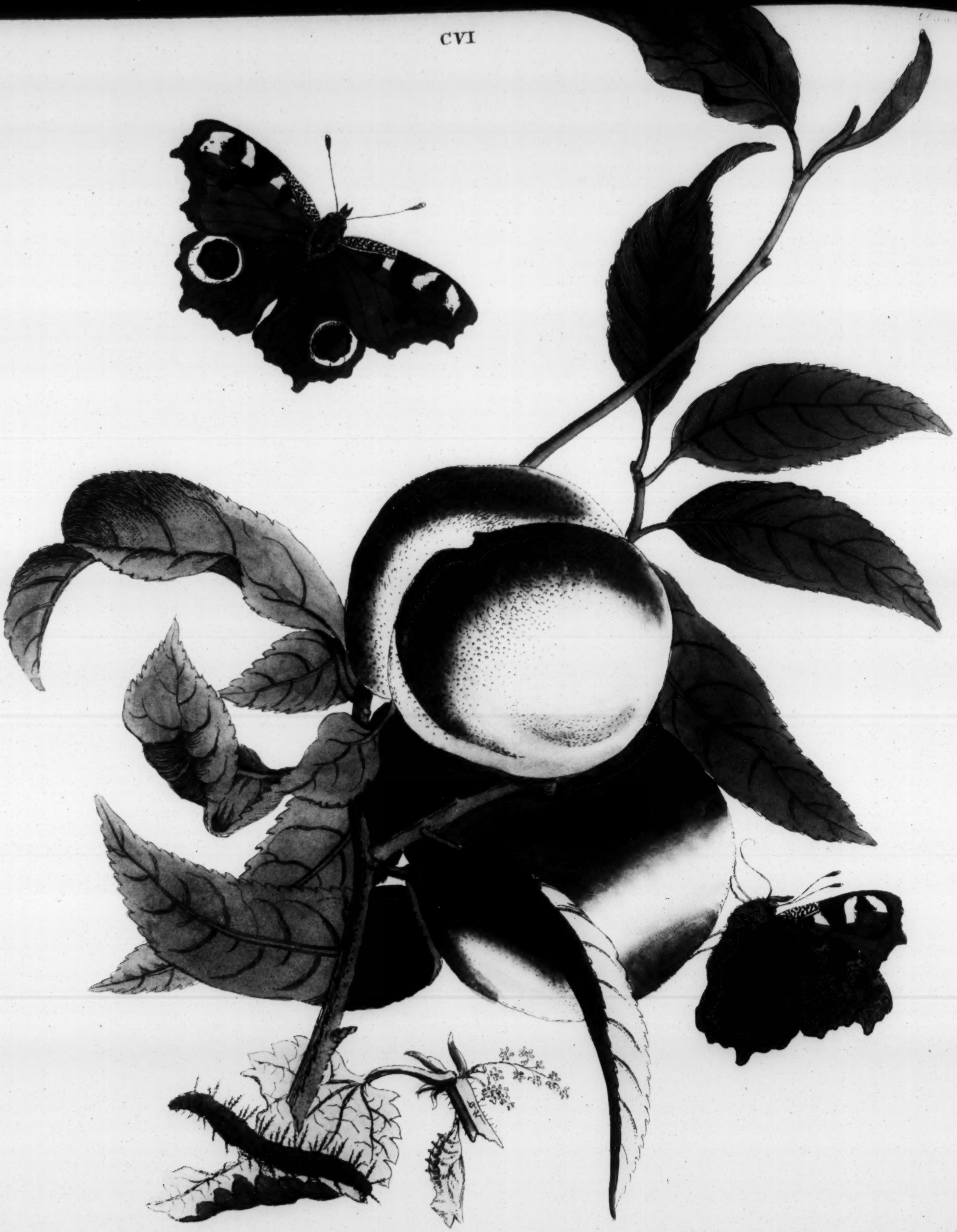

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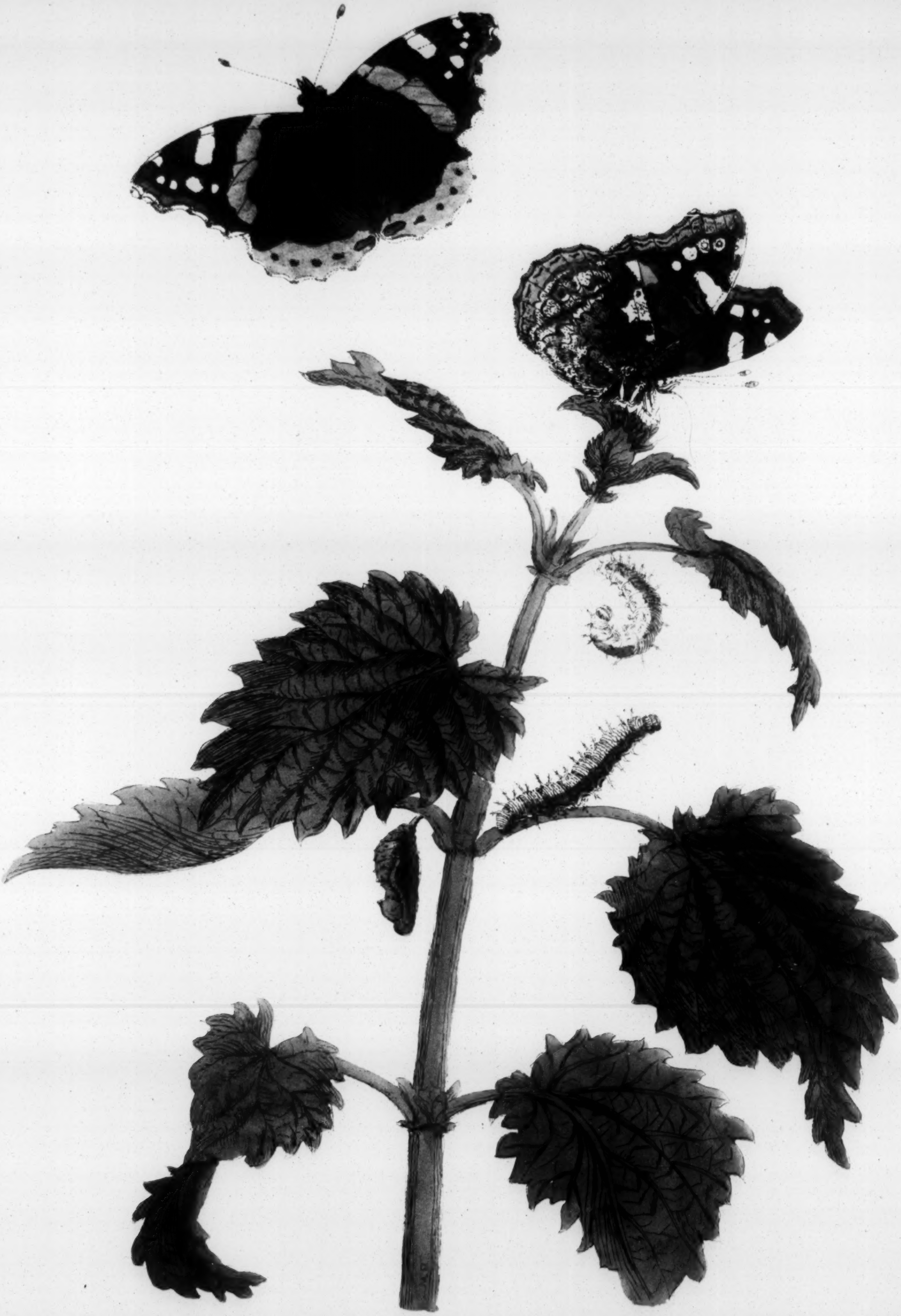


CLASS III.

CATERPILLARS armed with Spikes.

SECT. *a*.

Whoſe Chryſalis *hangs by the Tail perpendicularly downwards.*

L. 3. CH. 1. I. CL. 3. S. a. 1.

THE ADMIRABLE-BUTTERFLY. The great *Stinging Nettle* is the Food of this *Caterpillar*, which is to be found by obſerving where the *Nettle-Leaves* appear to be folded or ſpun together, for within ſuch Leaves the *Caterpillar* feeds. It turns in *Auguſt* to a *Chryſalis*, hanging perpendicularly downwards by the Tail, fourteen Days after the *Chryſalis* is formed the *Fly* appears. The *Caterpillars* ſhelter themſelves after this Manner, that they may be the better ſecured from the too great Heat of the Sun, from Rain, Birds, and a ſmall *Ichneumon Fly*, which often hinders their coming to Perfection, by laying its Eggs therein, which Eggs are of ſuch a glutenous Nature, that they ſtick faſt as ſoon as laid. Some of the *Chryſalides* appear as if gilded with burniſhed Gold, but ſuch uſually produce not a *Butterfly*, but a Brood of ſmall, though very beautiful *Ichneumons*. The *Fly* may be taken in Gardens and other Places, it feeds on *Fruit* that lies under Trees, *&c.* and is no uncommon *Fly*. It lives quite through the Winter.

See *Goedart*, Vol. 1. Tab. 26. Pag. 96. Fig. Opt. Liſt. Fig. 4. Gr. V. 2. Pag. 81. Tab. 81. Fig. Opt. Moff. 100. Num. 6. *An. Hoef*. Tab. 12. Fig. 15. *Raii*, Hiſt. Inſect. P. 126. *Albin*, Pl. 3. *Reaumur*, Pl. 10. Pag. 284, Vol. 1.

The Great Stinging-Nettle.

Urtica major vulgaris. J. B.

L. 3. CH. 1. II. CL. 3. S. a. 2.

THE PEACOCK-BUTTERFLY. You muſt look for the *Caterpillar* that produces this *Fly* in the great *Stinging-Nettle*. They are ſociable and feed together, are very eaſy to find, and may be taken full fed towards the End of *June*, at which Time many of them change to the *Chryſalis*, and about fourteen Days after the *Fly* appears. It is very common, and may be taken on *Thiſtles*, *Burdock*, *Clover*, &c. The *Chryſalis* of this

this *Fly*, as well as the preceding, ſometimes looks as if gilt with Gold: but ſuch fine outſides uſually produce *Ichneumons*. This ***Fly*** likewiſe lives all the Winter.

See *Reaumur*, Pl. 25. Pag. 446. Vol. 1. *Goed.* Vol. 1. P. 23. Fig. opt. 1. *Liſt.* Fig. 1. *Graf.* Vol. 1. Tab. 26. Pag. 53. *Raii*, Hiſt. Inſect. Pag. 122. N. 14. *Moufet*, P. 99. N. 4. *Hoef.* Tab. 12. Fig. opt. 9. *Johnſ.* Inſt. 40. n. 4. Tab. 5. *Albin*, Pl. 4. *Roſel*, Cl. 1. T. 3.

Smith's Newington Peach.

L. 3. CH. 1. III. CL. 3. S. a. 3

THE PAINTED-LADY-BUTTERFLY. In this Plate two *Butterflies* are repreſented, the upper one of which is the *Painted Lady*. Its *Caterpillar* feeds on the great *Stinging-Nettle*, *Thiſtles*, &c. changes to a *Chryſalis* within the Leaves folded together in the Middle of *June*, is fourteen Days in that State, and then the *Fly* comes forth. It may be taken on the ſame Growths as the laſt, but is not ſo common.

Figure 4 repreſents, the SMALL TORTOISE-SHELL-BUTTERFLY, which is very common, and breeds twice a Year: The firſt Brood is towards the End of *June*, the ſecond about the End of *Auguſt*. The *Caterpillar* feeds on *Nettles*, is open and ſociable, and may be taken full fed about the Middle of *June*, and the Middle of *Auguſt*, and is about fourteen Days in *Chryſalis*. This *Butterfly* out-lives the Winter.

See *Liſter* on *Goedart*, Pag. 7. N. 5. *Albin*, Pl. 56. Fig. 4. *Goed.* Vol. 1. Pag. 90, Fig. opt, 21. *Liſt.* Fig. 2. *Graf.* Vol. 1. P. 89. *Mouff*, 101. N. 11, figured againſt N. 12. *Hoef.* Tab. 2. Fig. opt. 16. *Raii*, Hiſt. Inſect. Pag. 117. N. 1. *Albin*, Pl. 4. *Roſel*, Cl. 1. Tab. 4. *Reaumur*, Pl. 26. Pag. 446. Vol. 1.

The Great Stinging-Nettle.

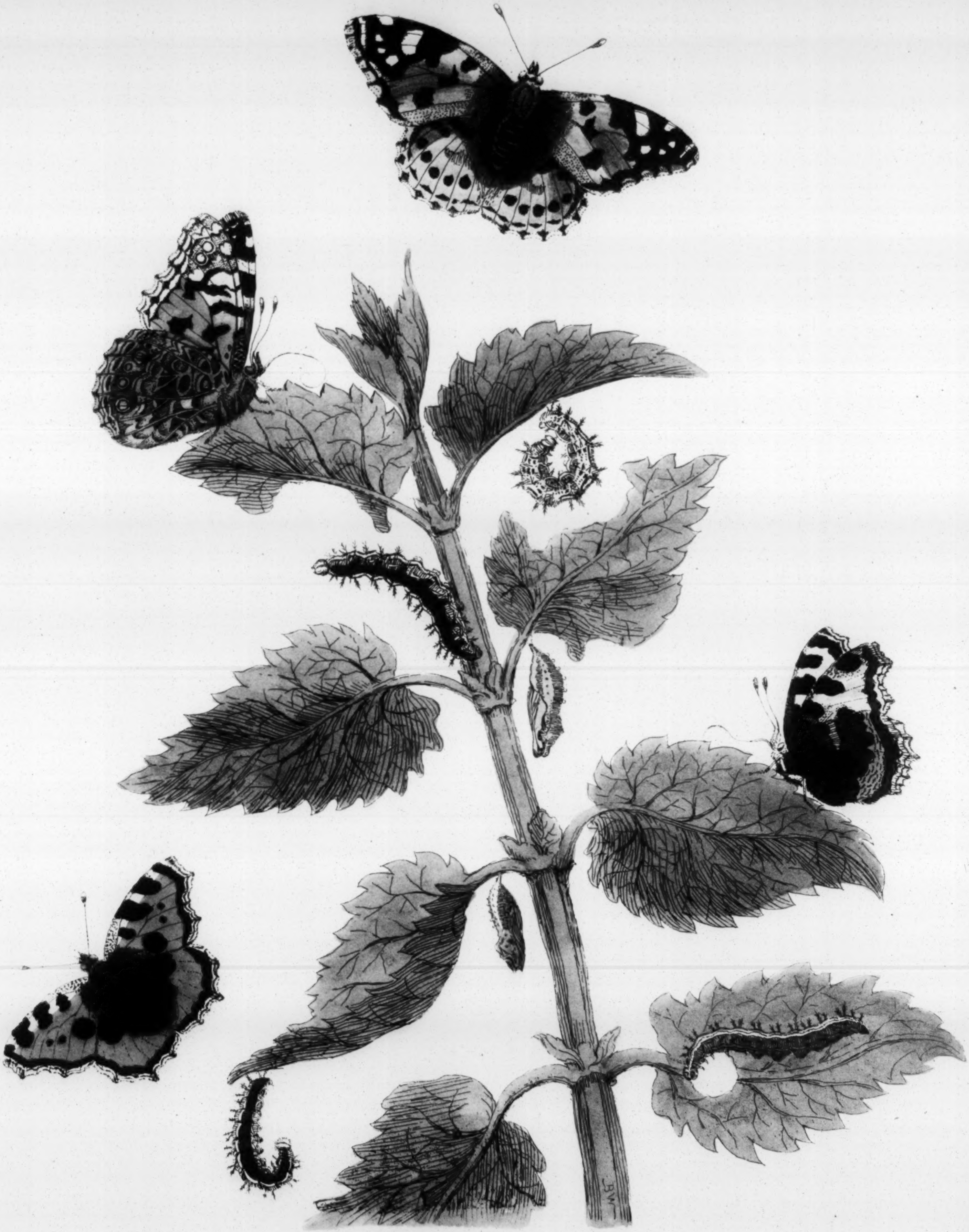
Urtica major vulgaris. J. B.

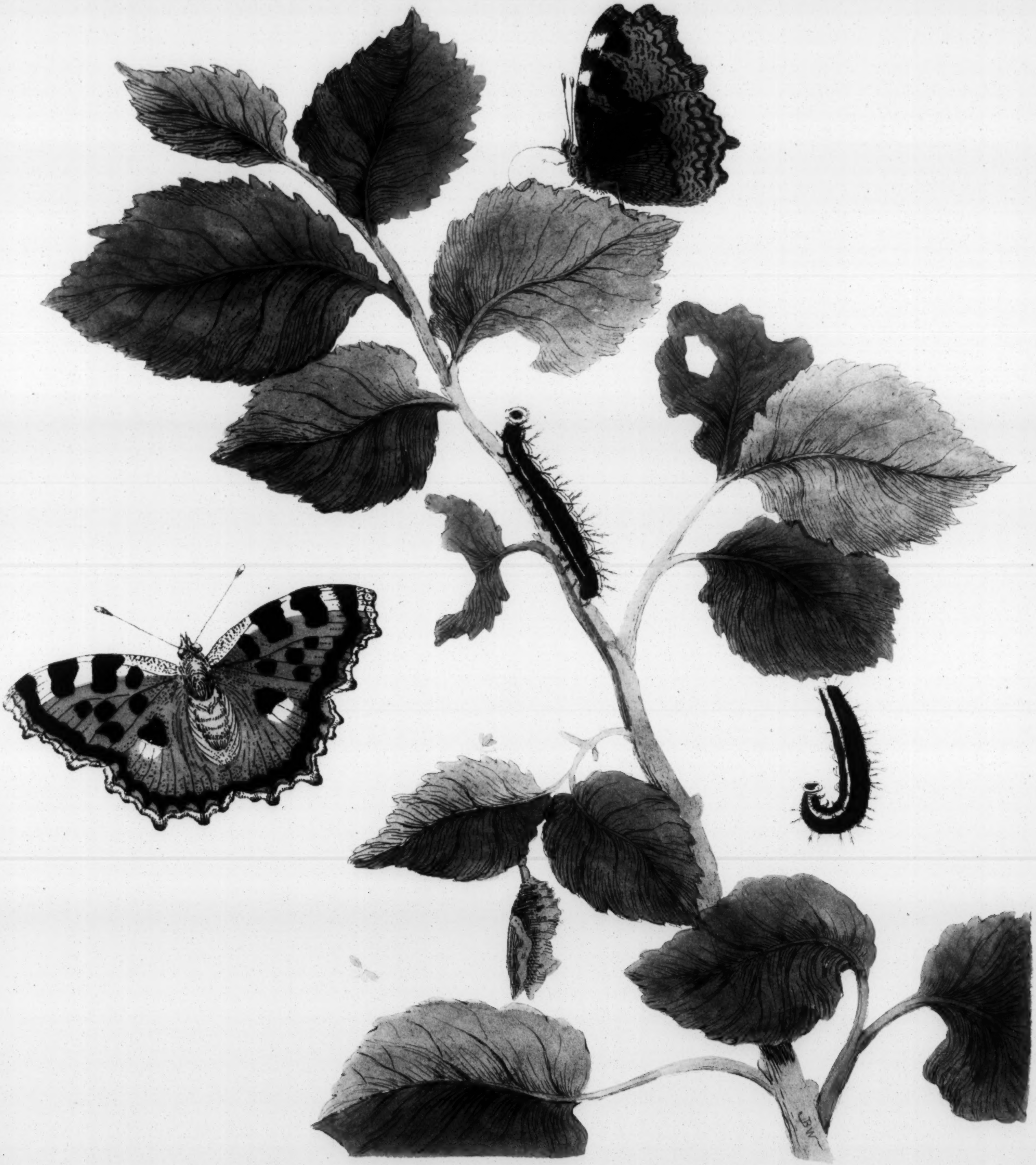
L. 3. CH. 1. V. CL. 3. S. a. 5.

THE GREAT TORTOISE-SHELL-BUTTERFLY. When the *Caterpillars* of this *Fly* are young, they feed together on the Leaves of the *Elm-Tree*, &c. About the Middle of *June* they are full fed, and uſually tie themſelves up by the Tail under the Copings of Walls, or ſome ſuch Shelter; in the Beginning of *July* the *Fly* comes out,

and

CVII

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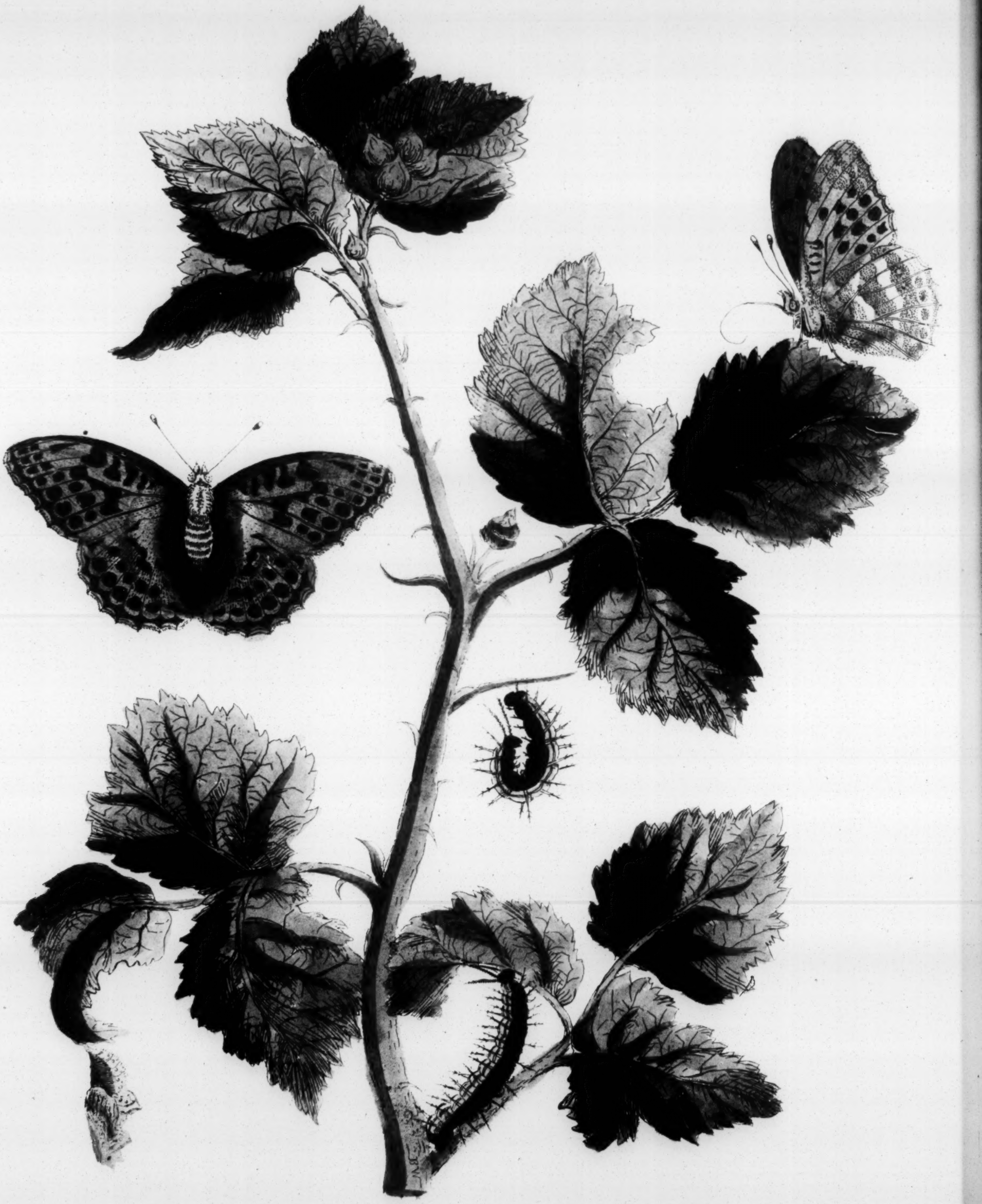
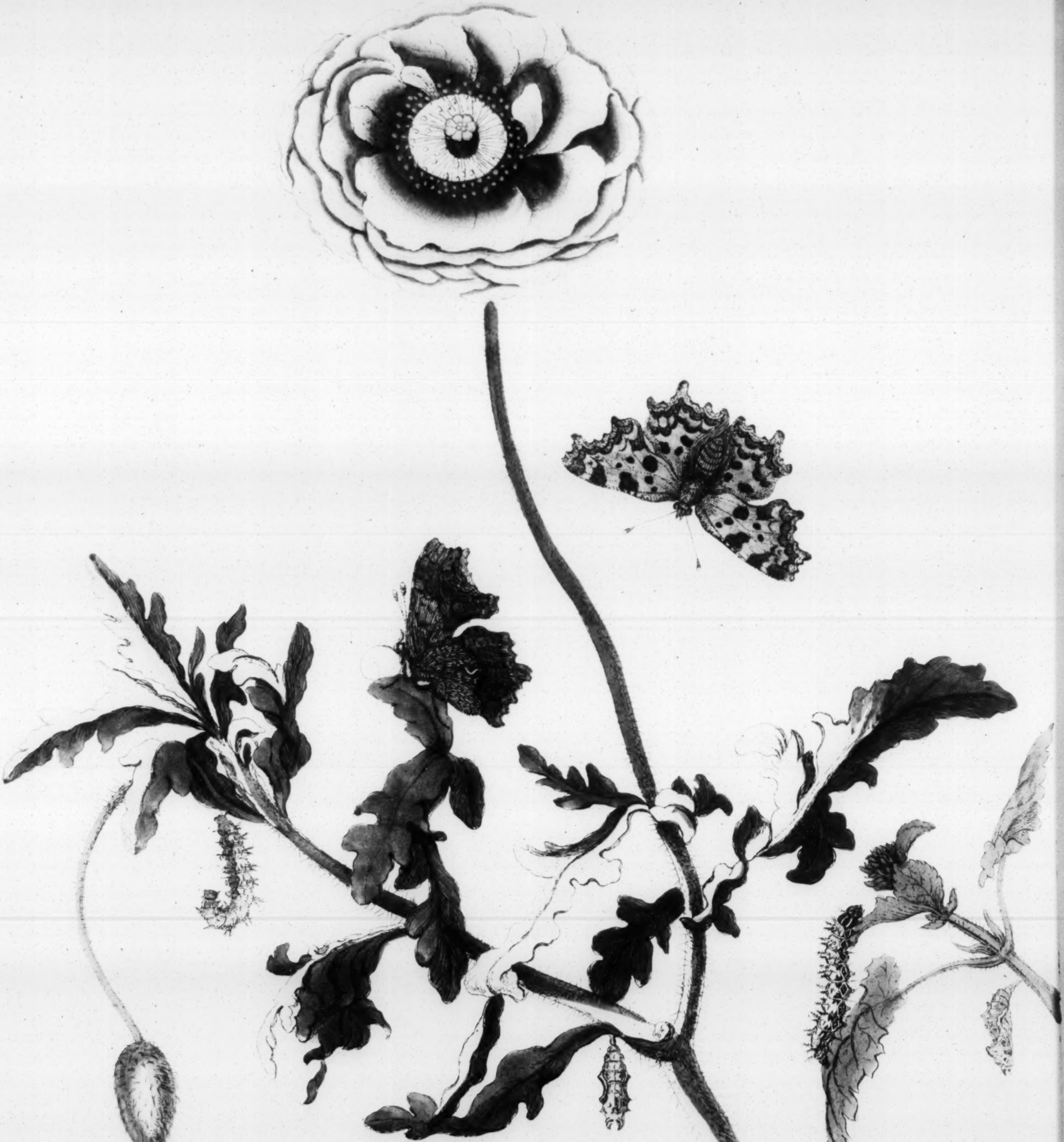




and delights to ſettle in dry Path-ways, as alſo on the Bodies of Trees, *&c.* is ſwiſt in its Flight, and requires Nimbleneſs to take it. The *Chryſalis* is very apt to produce *Ichneumons* inſtead of its own *Butterfly*, thoſe Creatures having laid their Eggs therein. This *Fly* lives all Winter.

See *Reaumur*, Pl, 23. Pag. 382. Vol. 1. *Liſt.* on *Goedart*, Pag. 3. N. 3, *Merian*, Vol. 2. Tab. 2. *Albin*, Pl. 55. *Roſel*, Cl. 1. Tab. 2.

The Common Elm-Tree.

Ulmus minor folio Anguſto Scabro. Ger. Emac, 1480.

L. 3. Ch. 1. VI. Cl. 2. S. a. 6

THE COMMA-BUTTERFLY breeds twice a Year: The firſt Time towards the End of *June*, and the ſecond about the Beginning of *September*. The *Caterpillar* feeds on *Hop-Leaves*, *Nettles*, &c. puts on the *Chryſalis* Form in *June* and *Auguſt*, and is about fourteen Days in that State, when the *Fly* appears, which may be taken in Gardens, on *Blackberry* Bloſſoms, by the Sides of Hedges, and in ſuch like Places. The Colours of the firſt Brood of this *Butterfly* are conſiderably lighter than as here repreſented.

The Double Wild Poppy, with a fiery-coloured Flower edged with white.

Papaver, erraticum, flore pleno igneo marginibus candidis. H. L.

L. 3. Ch. 1. VII. Cl. 2. S. a. 7.

THE GREAT FRITILLARY BUTTERFLY. Mr. *Roſel* ſays, the *Caterpillar* feeds on *Nettles*, in the private Receſſes of Woods, that it changes into the *Chryſalis* State at the End of *May*, and that the *Fly* is produced in *June*. This *Butterfly* is very ſwiſt in Flight, and is beſt taken in the Forenoon, when it will ſettle and feed on *Blackberry Bloſſoms*, *Thiſtles*, &c. They are moſt commonly found in Woods, and the Fields adjacent to Woods.

See *Roſel*, Cl. 1. Tab. 7.

The Bramble.

Rubus major, fructu nigro. J. B.

VIII.

L. 3. Ch. 1. **VIII.** Cl. 2. S. a. 8.

THE PLANTAIN FRITILLARY-BUTTERFLY. The *Caterpillar* hereof feeds on *Plantain*, *Clover*, and *Graſs*, changes to a *Chryſalis*, within a Web of its own ſpinning, upon the Surface of the Ground, at the Beginning of *May*, and the *Fly* appears fourteen Days after. The *Caterpillars* are ſociable, and feed together. They appear of a very timorous Nature, for if you move the Food on which they are, they immediately quit their Hold and fall to the Ground, and there remain in a curl'd-up Form till ſuch Time they think the Danger over. The *Butterfly* is ſwift in Flight, but may be taken if diligently attended to, in Fields of *Hay-Graſs*, at the Time above-mentioned.

Figure 1. Rough Graſs. 2. Plantain. 3. Clover.

1. *Gramen aſperum.* J. B. 2. *Plantago major vulg.* C. B.

L. 3. Ch. 1. **IX.** Cl. 2. S. a. 9.

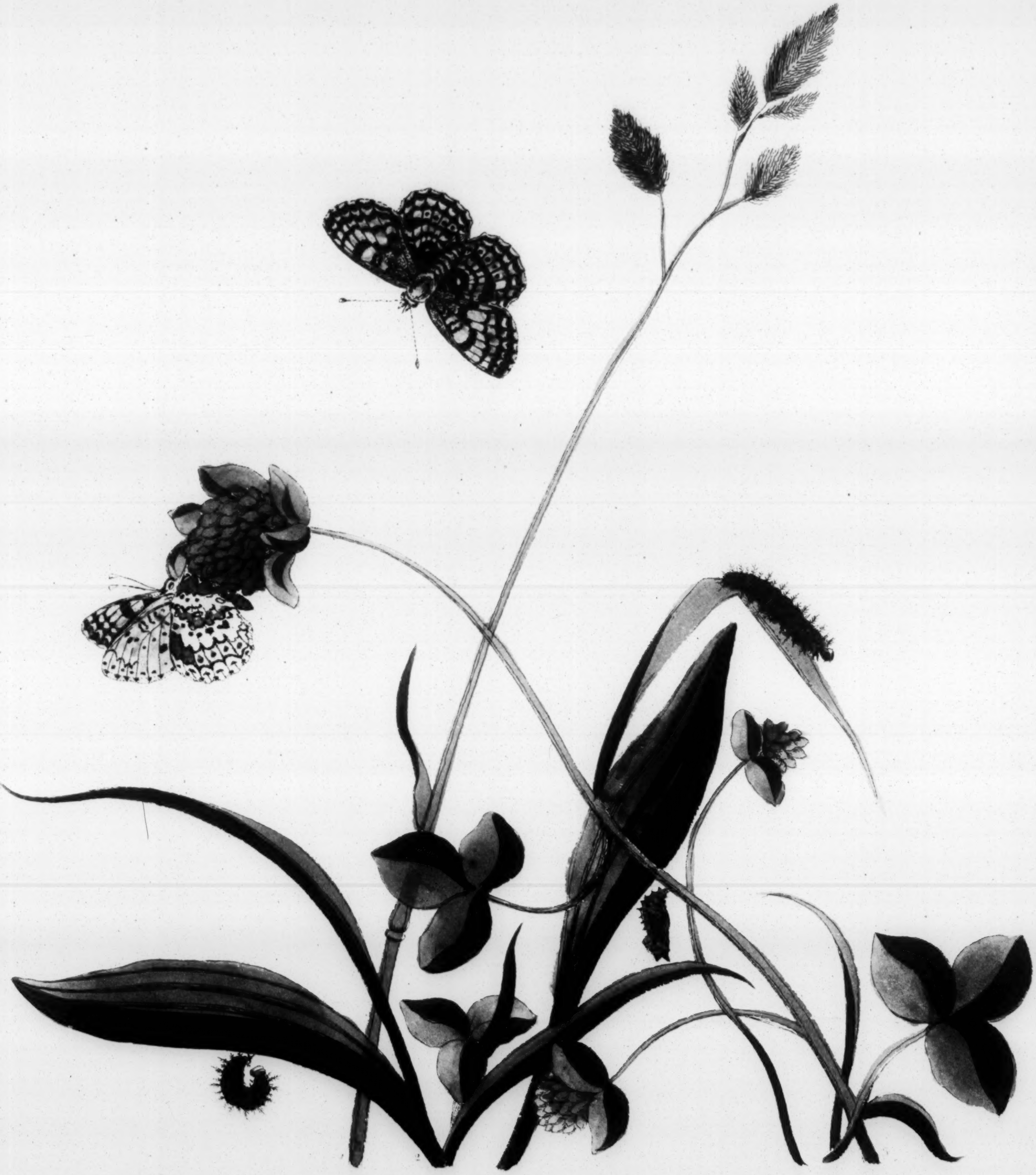
THE HEATH FRITILLARY-BUTTERFLY. I found the *Caterpillars* of this *Fly* feeding on common *Heath* in *Tottenham*-Wood, about the Middle of *May*, 1745, and they are of the ſame fearful Nature as the laſt-mentioned. Six or ſeven of them were feeding near each other, I obſerved their Manner of eating, which was extremely quick, and when they moved it was at a great Rate. I fed them with common *Heath* for three or four Days; at the End of which ſome of them changed into *Chryſalis*, in which State they remained about fourteen Days, and then the *Flies* came forth. This *Butterfly* is very common in moſt Woods, but its *Caterpillar* is very rarely ſound.

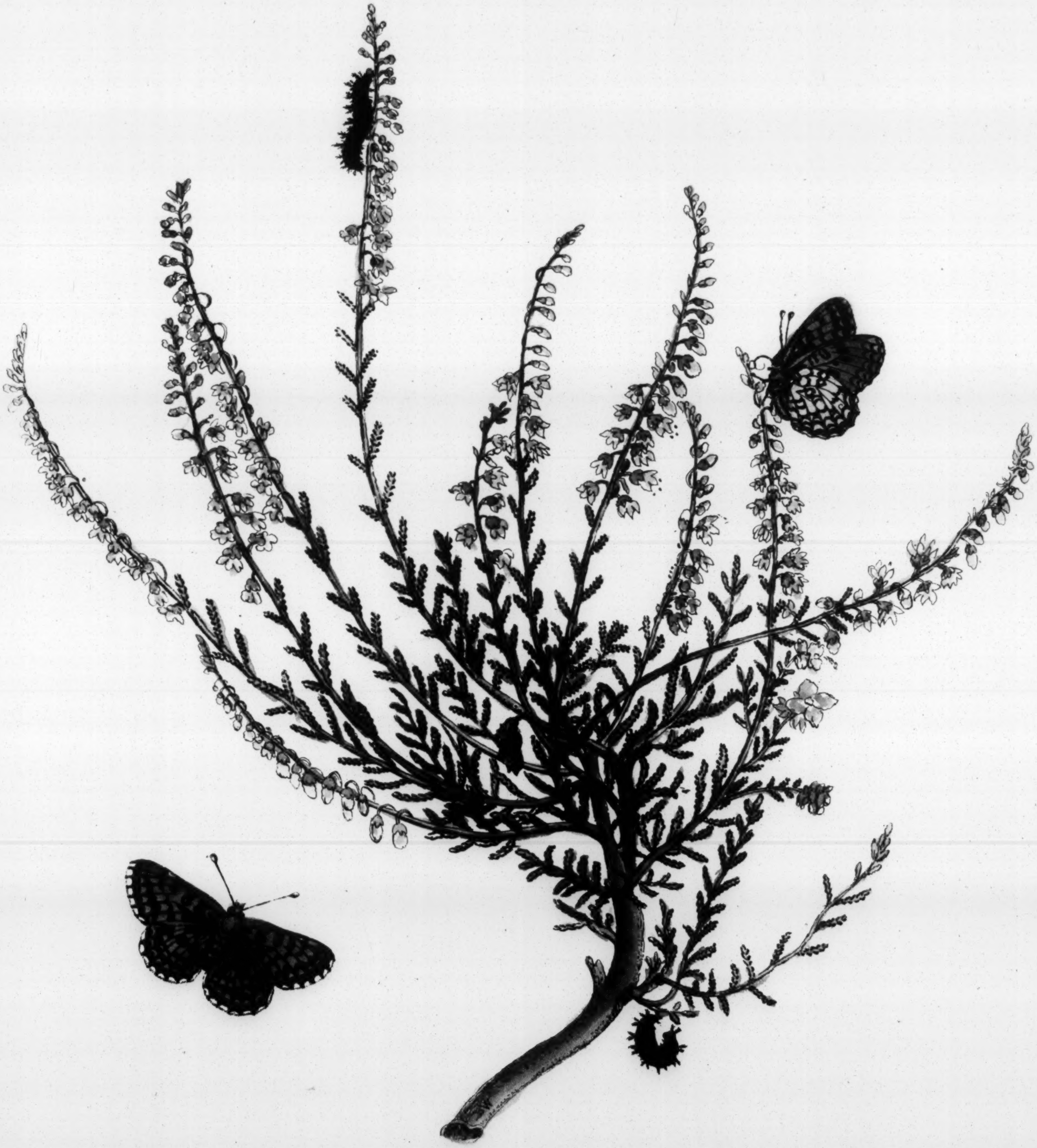
Common Heath in Flower.

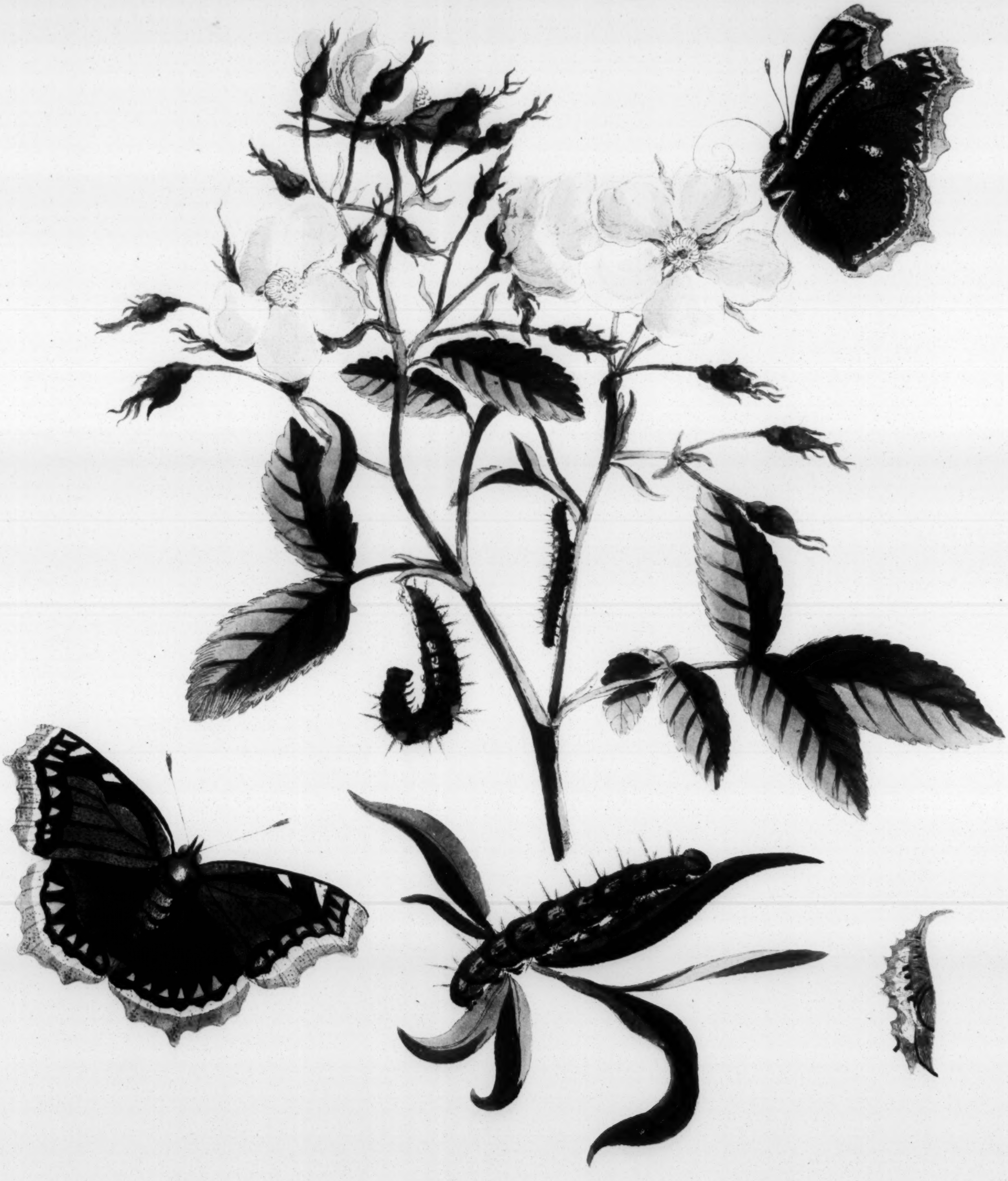
Erica Vulgaris. Park.

L. 3. Ch. 1. **X.** Cl. 2. S. a. 10.

THE WILLOW-BUTTERFLY. About the Middle of *Auguſt*, 1748, two of this Species of *Butterfly* were taken near *Camberwell*, in *Surry*: But in all my Practice I have never ſeen any of them in the Fields; ſo that they were look'd upon as very great Rarities. They are very common in *Germany*, and Mr. *Roſel* tells us, the *Caterpillar*







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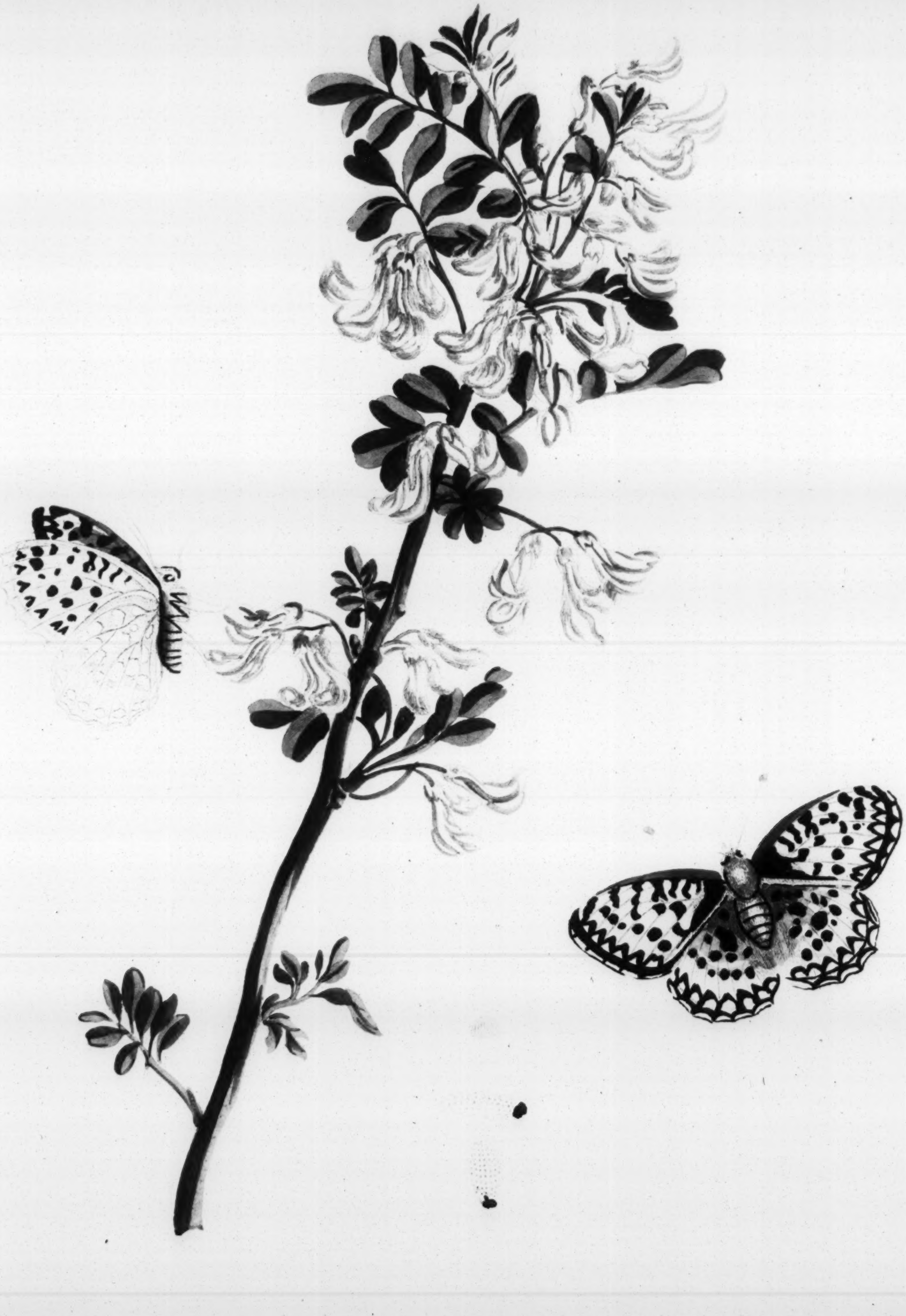
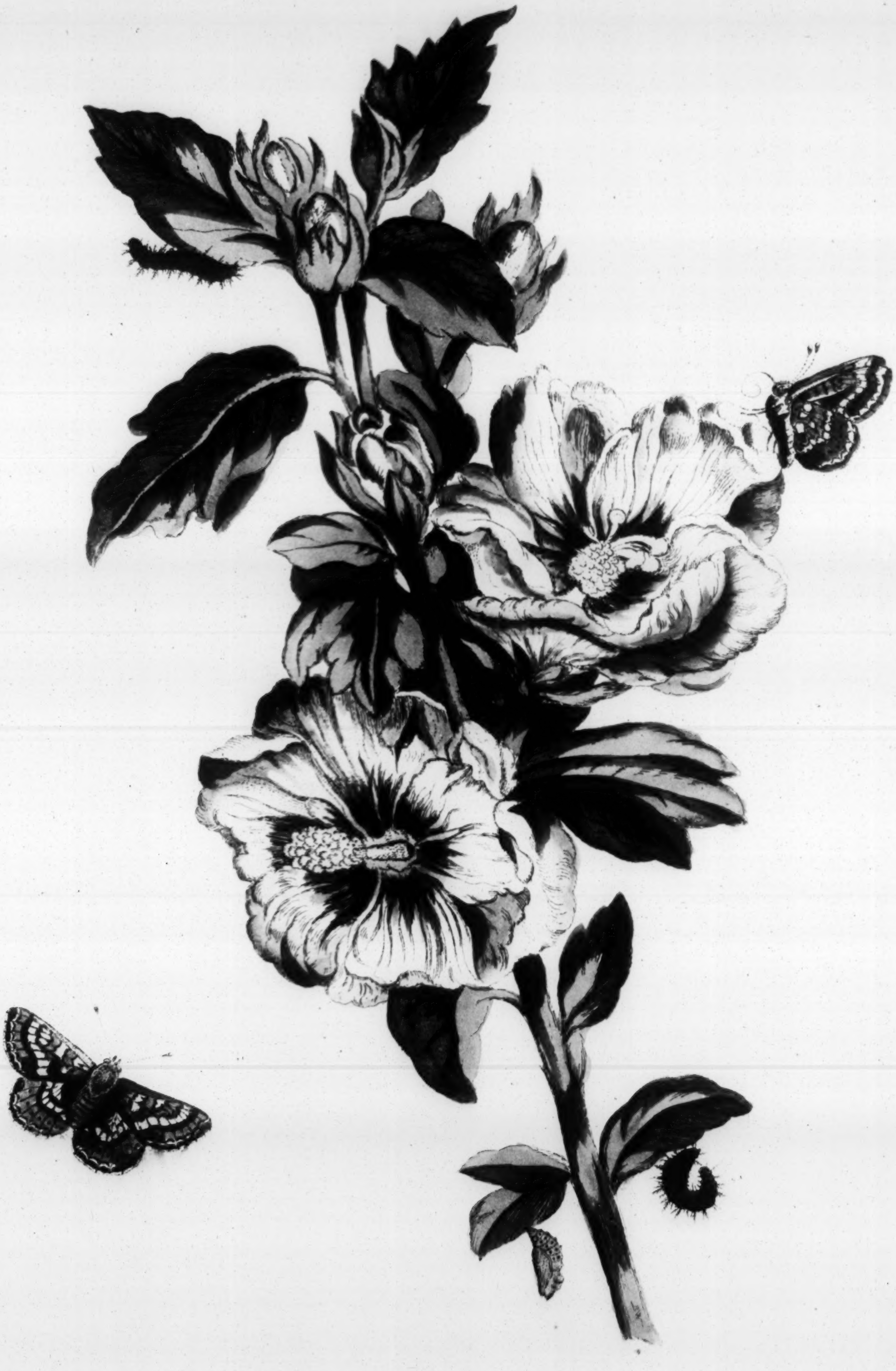




feeds on *Willow*, and may be ſound all the Summer. The *Caterpillar* and *Chryſalis*, in the Plate, are taken from a Draught by Mr. *Roſel*.

See *Roſel*, Cl. 1. Tab. 1.

The White Dog-Roſe.

Roſa arvenſis candida. C. B.

L. 3. Ch. 1.

XI.

Cl. 3. S. a. 11.

THE SMALL FRITTILLARY-BUTTERFLY. About the 10th of *April*, 1741, I took upon the Ground upwards of one Hundred of theſe *Caterpillars*, in *Cain* Wood. I gave them to eat a Variety of Growths (which I gathered on the Spot where I found the *Caterpillars*) but they were ſo reſtleſs and uneaſy under Confinement, that they ſeemed in continual Motion, neither would they eat any of the Food I gave them. On the 18th of *April* ten of the *Caterpillars* faſtened themſelves up by the Tail, in order to their changing into the *Chryſalis* State, (the reſt being dead or gone away) and on the 3d of *May* following the *Flies* were bred. This *Butterfly* is to be taken in Woods and Graſs-Fields adjacent to Woods, in the Month of *May*.

The Variegated Ketmia.

Ketmia Syrorum Flore variegato. J. R. H.

L. 3. Ch. 1.

XII.

Cl. 2. S. a. 12.

THE GREAT FRITTILLARY-BUTTERFLY, with Silver Spots. I take this *Fly* to be of the Claſs under Conſideration. On the 15th of *July*, 1748, I had three Eggs laid by ſuch a *Fly* as is repreſented in the Plate at Fig. 1. and on the 5th of *Auguſt* the young *Caterpillars* came ſorth: which, being examined with a Microſcope, appeared to be of the Size repreſented. They were of a Fleſh Colour, with Rows of Black Spots on each Joint like the *Caterpillars* of the *Emperor Moth*, and out of each Spot grew Hairs of a ſandy Colour. The Eggs were beautifully fluted down the Sides, were flat at the Bottom, and had a glutenous Moiſture upon them, which occaſioned their ſticking faſt wherever the *Fly* choſe to leave them. The *Caterpillars* on this preſent 10th of *February*, 1748-9, ſeem to be alive, but are very ſmall, and, I believe, have eat nothing all the Winter, though they

have

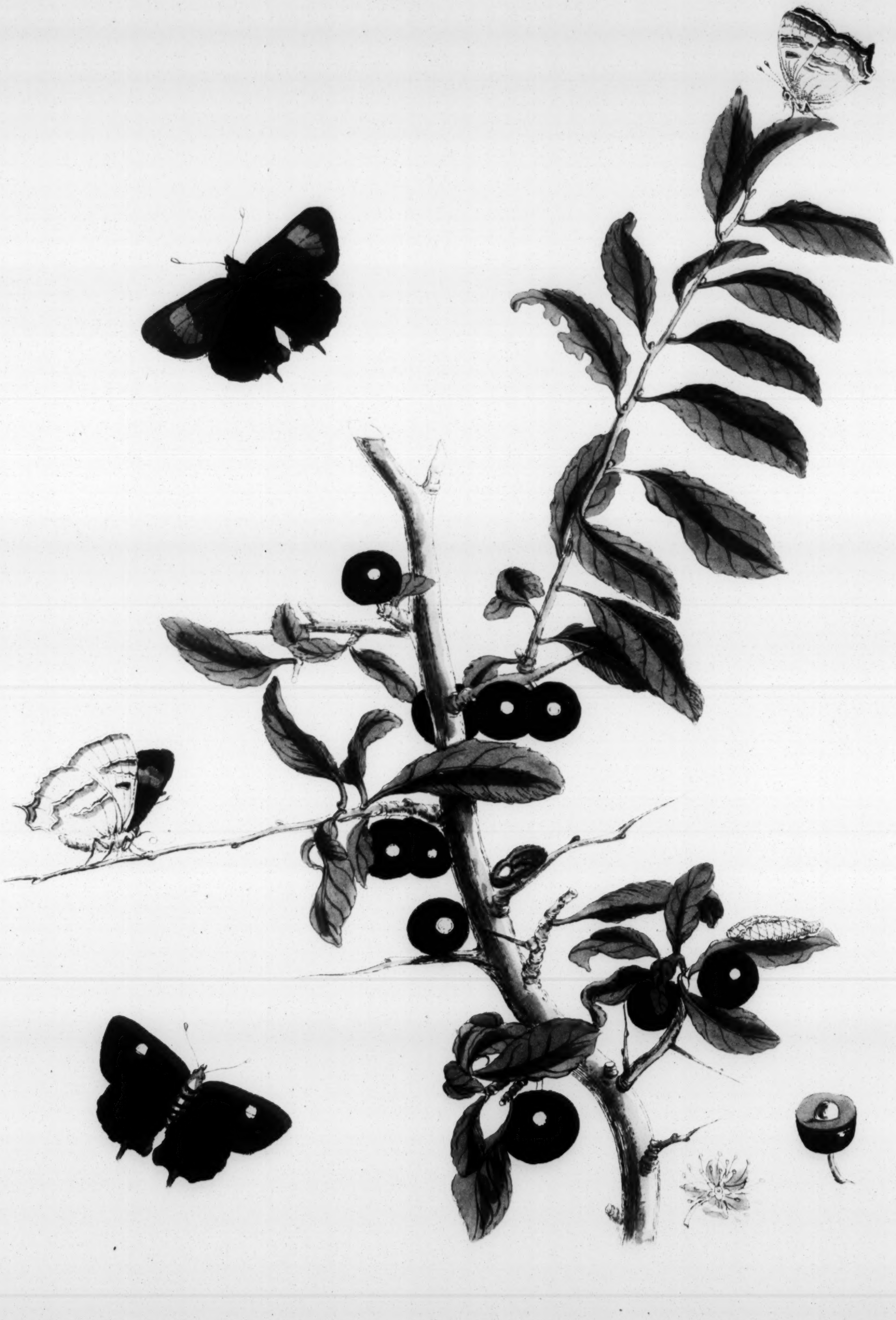
have had Graſs given them, which I take to be their proper Food. The *Fly* frequents Woods and Meads, and loves to ſettle on *Blackberry Bloſſoms*, *Thiſtles*, &c. At the Beginning of *July* they may be taken with your Net; but as no *Butterfly* is more ſwift in Flight, you muſt attend till they ſettle, then be nimble and you may catch them.

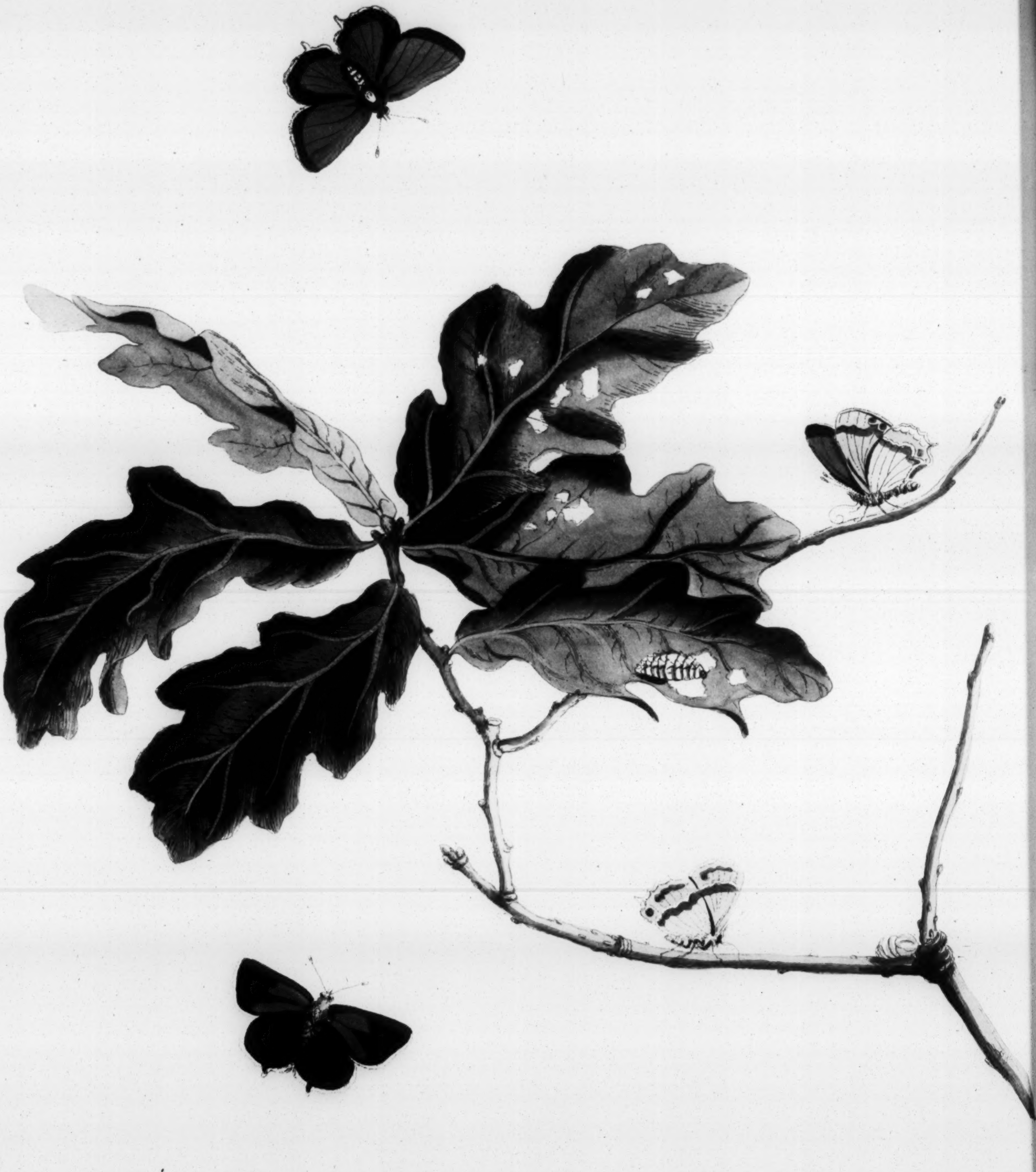
The Scorpion Sena.

Emerus Cæſalpin.

clisar

CXVII





CHAP. II.

CATERPILLARS ſhaped like Wood-Lice.

CLASS I.

SECT. *a.*

L. 3. CH. 2. **I.** CL. 1 S. *a.* 1.

THE PURPLE HAIR-STREAK-BUTTERFLY. The *Caterpillar* feeds on *Oak-Leaves*, becomes a *Chryſalis* at the Beginning of *June*, and in a Month after the *Fly* appears. This *Butterfly* is not ſo eaſily taken as ſome others, for when it is not feeding it uſually ſettles high. I have taken the greateſt Numbers early in a Morning, when I have found them feeding on the Bloſſoms of the *Blackberry*.

See *Albin*, P. 57. *Roſel*, Cl. 2. Tab. 9.

The Oak-Tree.

Quercus.

L. 3. CH. 2. **II.** CL. 1. S. *a.* 2.

THE BROWN HAIR-STREAK-BUTTERFLY. The *Caterpillar* of this *Butterfly* is ſeldom found: which, I believe, is owing to the oddneſs of its Shape and Colour, which are exactly repreſented in the Plate. I took four of them by beating the *Black-Thorn*, and fed them on the ſame till the Middle of *June*, at which Time they changed into the *Chryſalis*, and the *Fly* was bred in the Middle of *Auguſt*. This *Butterfly* delights to ſettle on the *Maple-Tree*, &c. by beating the Branches whereof the *Fly* will riſe, and may be taken in your Net.

The Black-Thorn.

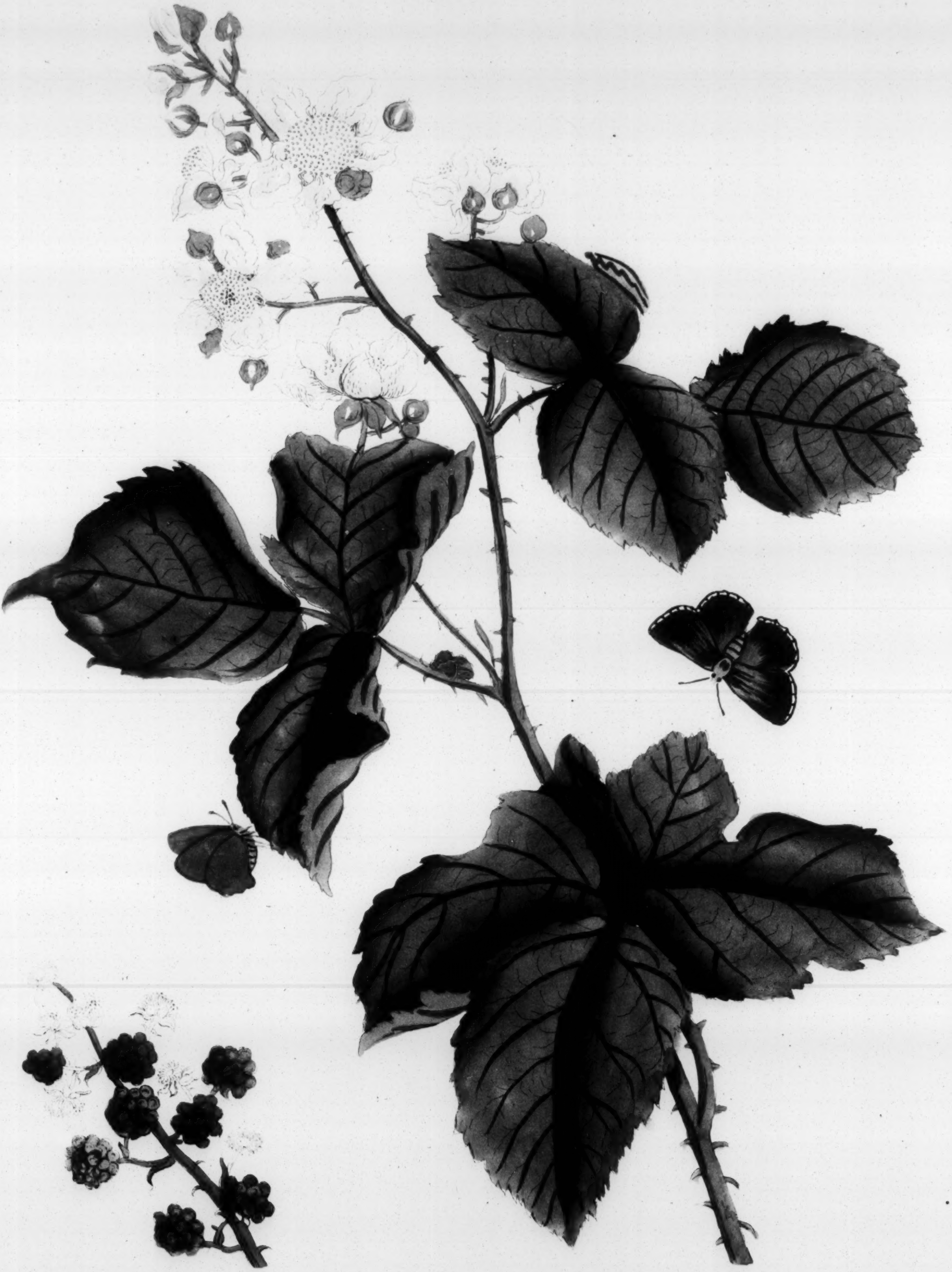
Prunus Sylveſtris. Germ. Emac.

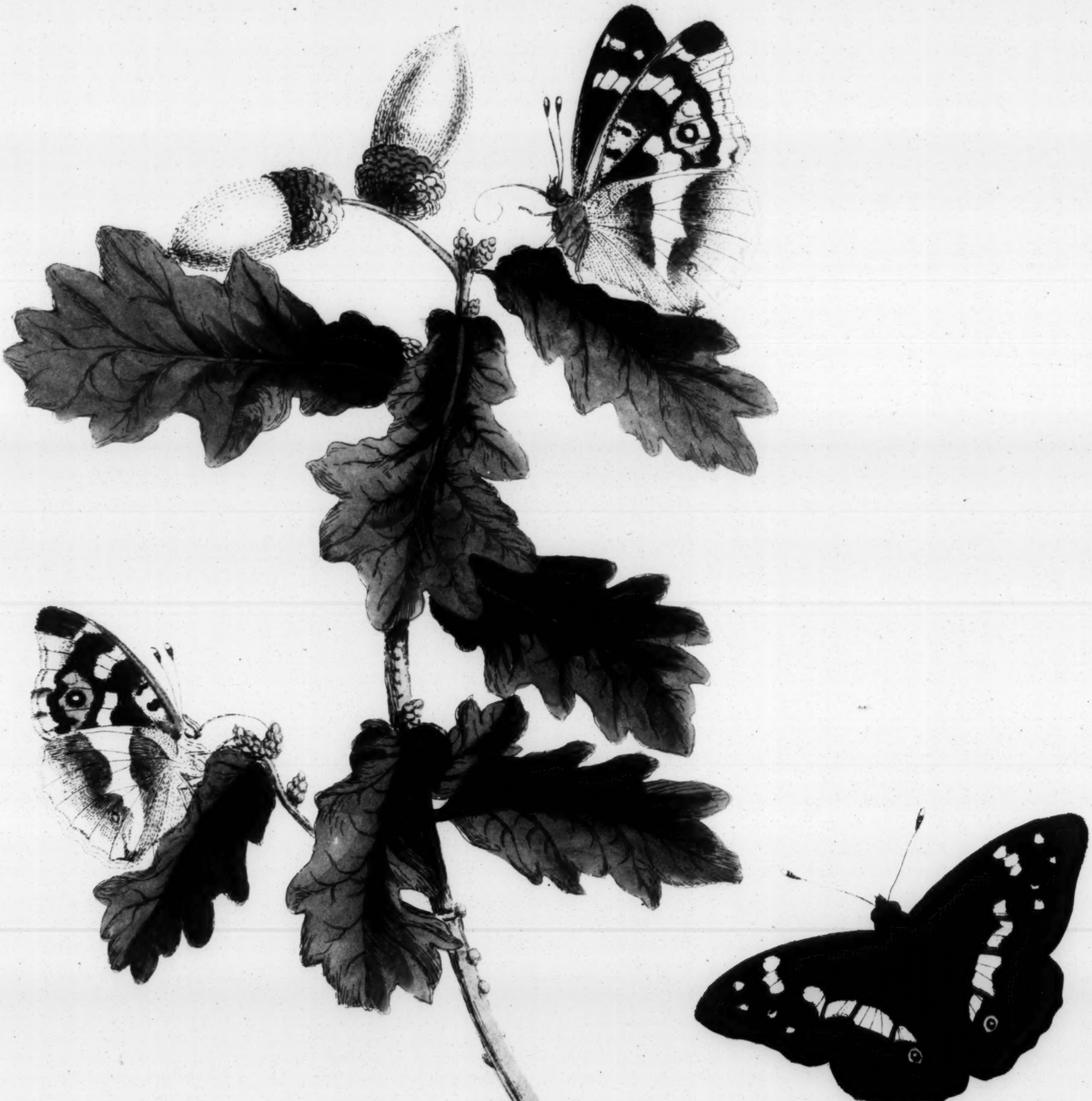
L. 3. Ch. 2. III. Cl. 1. S. *a.* 2.

THE GREEN BUTTERFLY. Mr. *Dandridge* took the *Caterpillar* of this *Fly* at the Beginning of *July*, feeding on the inſide of the *Blackberry* Buds, in which it made a ſmall Hole, whereby it entered, and eating all the inward Part, left the Buds ſeemingly entire: It fed on them till the Middle of *July*, and then changed to a *Chryſalis*; and in the Middle of *April*, the Year following, the *Fly* was bred. This *Butterfly* is moſt common in and near Woods; it delights to ſettle on Boughs four or five Feet from the Ground, by moving which the *Fly* will riſe, and if not much frighted will ſettle on or near the ſame Place again, by which Means you may take it with your Net. The beſt Time to catch this *Butterfly* is from the firſt to the fifteenth of *May*.

The Blackberry, with its Fruit and Bloſſom.

Rubus, major, fructu nigro. J. B.





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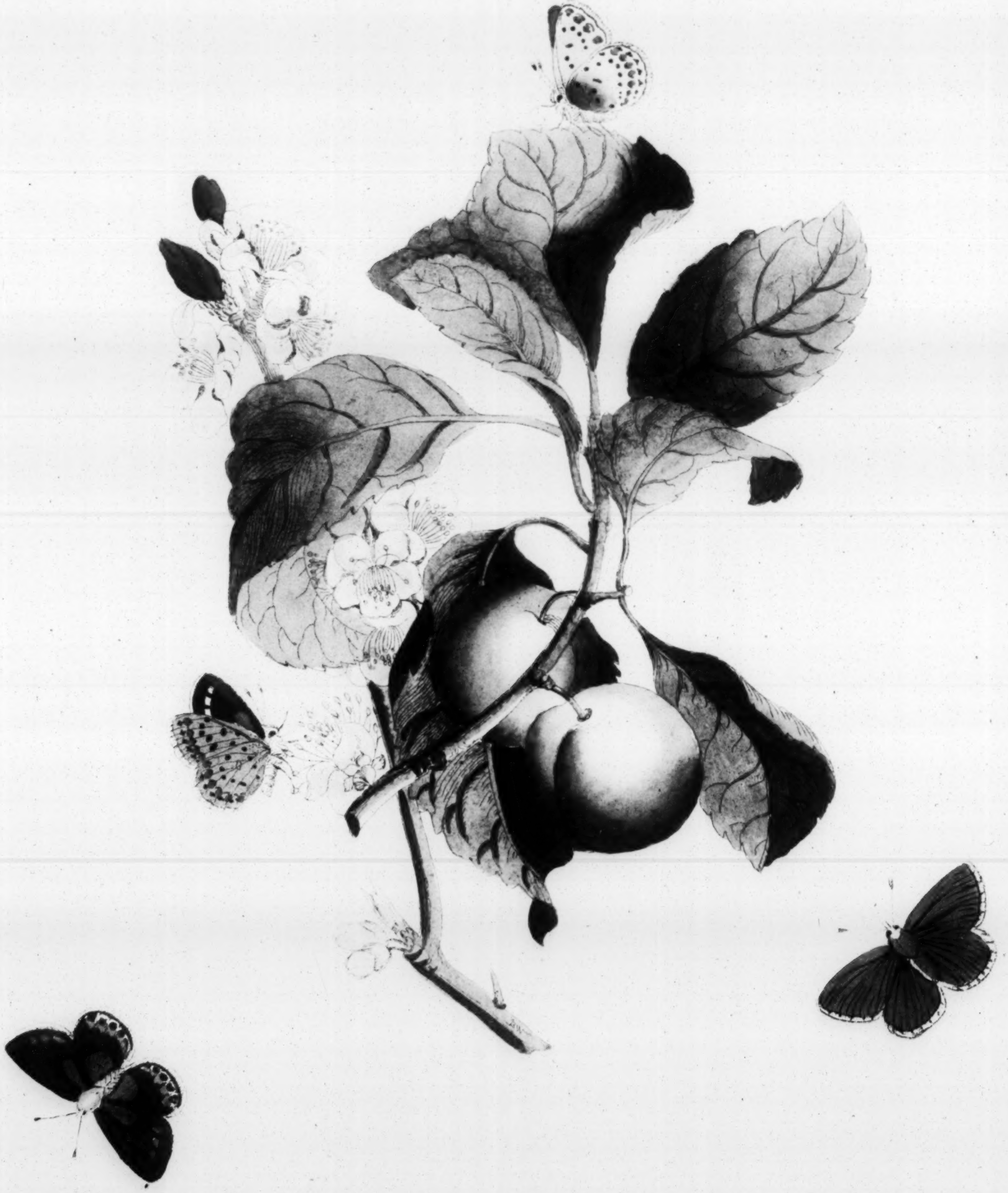

CHAP. III.

Of CATERPILLARS *whoſe Generation is not yet known.*

CLASS I.

SECT. *A.*

L. 3. CH. 3. I. CL. 1. S. *A.* 1.

THE BLUE ARGUS-BUTTERFLY breeds twice a Year: The firſt Brood appears in *May*, the ſecond at the End of *July* and Beginning of *Auguſt*. This *Fly* is very common in moſt *Hay-Fields* at thoſe Times, and is eaſily taken. As for the *Caterpillar* and *Chryſalis*, I have never yet heard that they have been diſcovered by any Body.

The Green Gage-Plumb.

Prunus fructu rotundo e viridi flaveſcente, carne dura ſuaviſſima. Miller.

L. 3. CH. 3. II. CL. 1. S. *A.* 2.

THE PURPLE HIGH-FLYER, or EMPEROR OF THE WOODS. Neither the *Caterpillar* nor *Chryſalis* of this charming *Fly* has been yet diſcovered, although ſought after with the utmoſt Diligence for ſeveral Years paſt. The *Butterfly* appears at the End of *June* and Beginning of *July*, and may be taken in *Comb*-Wood in *Surry*, about *Weſtram* in *Kent*, and in other Places. It flies like a Hawk, delighting to ſoar aloft and skim in the Air. When it ſettles it is uſually on ſome extreme Part of the *Oak*, *Haſe*, or *Aſh-Tree:* and what is very ſingular, I myſelf have ſeen twenty of them taken on the ſame Branch one after another, for although the *Fly* ſeems to be extremely wild whilſt on the Wing, yet, when ſettled, you may lay your Net over it with little Trouble.

The Oak *with its* Acorns.

Quercus.

FINIS.

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Quercus.

FINIS.

INDEX to the *PLANTS.*

A.

ALDER Tree. *Alnus.* —— —— 28
Almond Tree. *Amygdalus ſativa.* 25
———— double flowering. ———— ————50
Apple Tree. *Malus.*—— —— ————19
Apricot. *Malus Armeniaca.*
——— Bruſſels. — ——— —— 6
——— Maſculine.——— ——— — 31
——— Orange, ——— ————26
Red Archangel. *Lamium rubrum.* ————— 30
Wild Arrach. *Atriplex.* —— ——— 3
Arſmart. *Perſicaria.* ——— ——— 20

B.

Small Bindweed. *Convolvulus minor.* ———— 9
Biſtort. *Biſtorta.* —- —— —— 28
Blackberry. *Rubus.* ——— —— 25
Black-thorn. *Prunus ſylveſtris.* — 12, 16, 24, 61
Blue Bells. *Hyacinthus Anglicus.* —————39
Bramble. *Rubus.* ——— ——— 38, 57, 62
——— white Fruit. —— —— —— 16
Broom. *Geniſta.* —— —— —— — 5
——— Spaniſh. *Geniſta Juncea.* —— 53
Buckthorn. *Rhamnus Catharticus.*————— 48

C.

Cherry. *Ceraſus.*
——— double flowering.——— ————23
——— Honey. —— —— ——35
——— May. ——— ——— ——— 25
——— Wild Black. ——— ——— 36
Chickweed. *Alſine media.* —— —— 19
Codling. *Pomum coctile.* —— ——— 5
Wild Cole. *Braſſica ſylveſtris.*——————51
Columbine. *Aquilegia.*—— —— ————24
Crab Tree. *Malus ſylveſtris.* —— — 21
Cranes Bill. *Geranium.*—— —— —— 22
Curran Tree. *Ribes.*——— ——— ————42
—— ——— black. *Ribes nigrum.* —————36
————— Mountain. *Ribes Alpinum.* ————51

D.

Double Stock July Flower. *Leucoium.* ——— 2

E.

Elder.
—— Mountain. *Sambucus.* ——— —— 49
—— Water. *Opulus.*——— —— ——53
Elm. *Ulmus.*
—— Common.—— —— ———— 57
—— ſmooth leav'd.—— — — 31, 39
—— Witch.——— ——— ——— 38

G.

Gooſeberry Tree. *Groſſularia.* ——— 42
Graſs.
—— Bent. *Gramen Segetum.*——— ———52
—— brown Millet. *Gramen Miliaceum.* —— *ibid.*
—— great Fox-tail. *Gramen Alopecuroides.*———52
—— rough. *Gramen Aſperum*—— —— 58
—— white Darnel. *Gramen loliaceum.* ——— 28
Guelder Roſe. *Opulus.* —— ——— 8

H.

Carolina Hawthorn. *Meſpilus Caroliniana.* ———40
Common Heath. *Erica vulgaris.* —————— 58
Hounds Tongue. *Cynogloſſum.* —— —— 19
Vredenriek Hyacinth. *Hyacinthus Belgicus.*———24

J.

Jeſſamine. *Jaſminum.*—— —— —— 9
———— Spaniſh. *Jaſminum Humilius.* 40
Perſian Iris. *Xiphium Perſicum.* —— —— 8

K.

Ketmia.
——— Purple flower'd. *Ketmia.* ————— 8
——— Variegated. *Ketmia Syrorum.* ———— 59

L.

Ladies Bedſtraw.
———————— yellow. *Gallium luteum.* ——— 52
———————— white. *Gallium album.*————11
Larkſpur. *Delphinium.* ——————— 3
Small-leav'd Lime Tree. *Tilia fœmina.* ——— 10

M.

Common Mallow. *Malva vulgaris.* ———— 54

N.

Naſturtium. *Acriviola.*—— ——— ————50
Red Roman Nectarine. *Nuciperſica.* —— 17
Needle Furze. *Geniſta ſpinoſa.* ——————37
Nut Tree. *Corylus.* —— ——— —23

O.

Oak Tree. *Quercus.* ——————— 33, 61, 63
Ozier. *Salix vulgaris.* —— — ——— —— 12

P.
Paſſion Flower. *Granadilla.* 53
Peach. *Perſica.*
—— double flowering. *Perſica Africana.* 45
—— Orange. 4
—— Smith's Newington. 56
Periwinkle. *Pervinca* 6
Privet-headed Phylerea. *Phyllyrea.* 27
Plantain. *Plantago major.* 58
—— leſſer. *Plantago minor.* 24
Plumb. *Prunus.*
—— Apricot. 36
—— Cherry. 24
—— Great Mogul. 3
—— Green Gage. 63
—— Hatfield. 18
Poplar. *Populus.*
—— black. 11
—— white 21
Double wild Poppy. *Papaver erraticum* 57
Ever green Privet. *Liguſtrum.* 10

R.
Ragwort. *Jacobea.* 26
Ranunculus. *Ranunculus.* 24
—— double Orange. 7
—— red. 39
Roſe. *Roſa.*
—— Burnet. *Roſa Pumila.* 46
—— Ciphian. *Pimpinella Scotica.* 45
—— double Velvet. *Roſa holoſerica.* 44
—— Moſs Provence. *Roſa Provincialis.* 6
—— Sweet Briar. *Eglanteria.* 28
—— —— double flowered. 37
—— white Dog. *Roſa arvenſis candida.* 59
—— Wild. *Roſa ſylveſtris.* 12
—— yellow. *Roſa lutea.* 6
—— white double Garden. *Roſa alba hortenſis.* 30

S.
Sage. *Salvia.* 34
—— yellow flowered. *Phlomis.* 37
Sallow. *Salix.* 5
Meadow Saxifrage. *Seſeli pratenſe.* 48
Sena.
—— Bladder. *Colutea veſicaria.* 43
—— Scorpion. *Emerus.* 60
St. John's Wort. *Hypericum.* 31
Great Stinging-Nettle. *Urtica major.* 55, 56
Small Sun-Flower. *Corona ſolis.* 20
Sycamore Tree. *Acer.* 32

T.
Yellow-ſtriped Tulip. *Tulipa.* 4
Tway-Blade. *Bifolium.* 22

V.
Yellow Vetchling. *Lathyrus.* 22, 28

W.
Water Betony, or Water Figwort. *Betonica aquatica, Scrophularia aquatica.* 7
Willow. *Salix.* 13, 15
—— Crack. *Salix Fragilis.* 11
—— Dwarf. 41
—— Weeping. 17
—— Yellow Dwarf. 21
White Bells. *Hyacinthus.* 24
White-thorn. *Meſpilus, ſive Oxyacanthus.* 22, 39, 49
Wild Pine Tree. *Pinus ſylveſtris.* 29
Wood Peaſe. *Aſtragalus ſylvaticus.* 28

INDEX to the *FLIES*.

A.

Admirable Butterfly. — 55
Angle Shades. — 3
Argus Butterfly.
—— great. — 53
—— Wood. — ibid.
—— blue. — 63
Argus Moth.
—— Buff. — 37
Arrach Moth.
—— July. — 36
—— Wild. — 3

B.

Bindweed Hawk. See Hawk-Moth.
Black Arches. — 19
Black-thorn Moth. — 6
Black Tuſſock. See Tuſſock-Moth.
Bramble Moth. — 26
Brimſtone Butterfly. — 48
Brimſtone Moth. — 39
Brindled Beauty. — 35
Brindle Moth. — 43
Broom Moth. — 4
—— green. — 37
Buff-Argus. See Argus Moth.
Buff Moth.
—— ſpotted. — 20
Buff Tip. — 21
Burnet Moth. — 46

C.

Cinnabar Moth. — 26
Codling Moth. — 5
Comma Moth. — 57
Cleiſden Nonpareil. — 45
Cream-ſpot Tyger. See Tyger Moth.
Crimſon Underwing. See Underwing Moth.
Curran Moth. See large Magpye.

D.

Dagger Moth. — 28
December Moth. — 23
Drinker. — 27

E.

Ealing's Glory. — 12
Egger.
—— Graſs. — 23
—— great. — 22
—— ſmall. — 25
—— ſmall Oak. — 44
Elephant, or, Ladies Bedſtraw Moth. — 11
—— ſmall. — 7
Emperor Moth. — 15
Emperor of the Woods, or, Purple High-Flyer. — 63
Ermine Moth.
—— great. — 20
—— ſmall. — 4
Eyed Willow Hawk. See Hawk Moth.

F.

Fox-coloured Moth. — 25
Fritillary Butterfly.
—— great. — 57
—— with ſilver Spots. — 59
—— Heath. — 58
—— Plantain. — *ibid.*
—— ſmall. — 59

G.

Gipſey Moth. — 20
Glory of Kent. — 45
Goat Moth. — 15
Gold-ſpot Moth. — 8
Gooſeberry Moth. — 42
Green Broom Moth. See Broom Moth.
Green Butterfly. — 62
Green Moth with ſilver Lines. —

H.

Hair-ſtreak Butterfly.
—— Purple. — 61
—— Brown. — *ibid.*
Hawk Moth.
—— Bindweed, or, Unicorn Moth. — 9
—— Eyed Willow. — 10
—— Jeſſamine. — 9
—— Lime; or, Olive Shades. — 10
—— Poplar. — 11
—— Privet. — 10
Hawthorn Moth. — 40

J.

Jeſſamine Hawk. See Hawk Moth.
July Arrach Moth. See Arrach Moth.
July Sallow Moth. See Sallow Moth.

L.

Lackey Moth. — 21
Lady of the Woods; or, Orange Tip. — 51
Ladies Bedſtraw Moth. See Elephant.
Lappit Moth. — 27
—— Wild Pine Tree. — 29
Lime Hawk. See Hawk Moth.
Lime Moſs Moth. — 37

M.

Large Magpye, or Curran Moth. — 42
Marmoris, or marble Butterfly. — 52

Meadow Brown. — — — *ibid.*
Mother of Pearl Moth. — — — 24
Mottled Umber. — — — 36

N.

Nut-tree Tuſſock. See Tuſſock Moth.

O.

Oak Moth.
——— yellow July — — 24
——— ſmall Green. — — — — 4
——— ſcallop-wing'd. — — — 6
Oak Egger. See Egger Moth.
October Moth. — — 38
Olive Shades. See Lime Hawk.
Orange Moth. — — — — 40
Orange Tuſſock. See Tuſſock.
Orange Tip. See Lady of the Woods.
Ozier, or Pebble Moth. — — — 12

P.

Painted Lady. — — — 56
Peacock Butterfly. — — — 55
Peaſe Bloſſom. — — — 3
Pebble Moth. See Ozier Moth.
Plumb-Tree Moth. — — — — 17
Poplar Hawk. See Hawk Moth.
Privet Hawk. See Hawk Moth.
Province Roſe Moth. — — — 5
Purple High-Flier. See Emperor of the Woods.
Puſs Moth. — — — 13

R.

Ranunculus Moth. — — 7
Red Spot Tuſſock. See Tuſſock Moth.
Richmond Beauty. — — — 39

S.

Sallow Moth. — — — — 5
——— July. — — — 36
Scallop-wing'd Moth. — — — 39
Scarlet Tyger. See Tyger Moth.
Silver Y Moth. — — — 34
Spotted Buff. See Buff Moth.
Spotted Elm Moth. — — — 38
Spotted red and white Underwing. See Underwing.
Swallow-Tail Butterfly. — — — 47
Swallow-Tail Moth. — — — — 38
Sword-Graſs Moth. — — — — 8
Sycamore Tuſſock. See Tuſſock Moth.

T.

Great Tortoiſeſhell Butterfly. — — — 56
Tuſſock Moth.
——— black. — — — — 30
——— Nut-tree. — — — 31
——— Orange. — — — *ibid.*
——— Red-ſpot. — — — 30
——— Sycamore. — — — 32
——— yellow. — — — 30
Tyger Moth.
——— Cream-ſpot. — — — 18
——— great. — — *ibid.*
——— Scarlet. — — — 19
——— Wood. — — 24

U.

Underwing Moth.
——— Crimſon. — — — — 33
——— great yellow. — — — — 2
——— ſpotted red and white. — 23
——— Willow red. — — — 17
Unicorn Moth, See Bindweed Hawk Moth.

W.

Water Betony Moth. — — — 7
White Butterfly with black Veins. — 49
——— with green Veins. — 50
White Garden Butterfly.
——— large. — — 49
——— ſmall. — — 50
White Satin Moth. — — — 21
Wild Arrach Moth. — — — 3
Wild Roſe Moth. — — — — 14
Willow Butterfly. — — — 58
Willow red Underwing. See Underwing Moth.
Wood Tyger. See Tyger Moth.

Y.

Yellow Tail. — — — 28
Great yellow Underwing. See Underwing Moth.